U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION ONE

CONSTRUCTION/RECONSTRUCTION PLANS FOR SPECIFIED ROADS

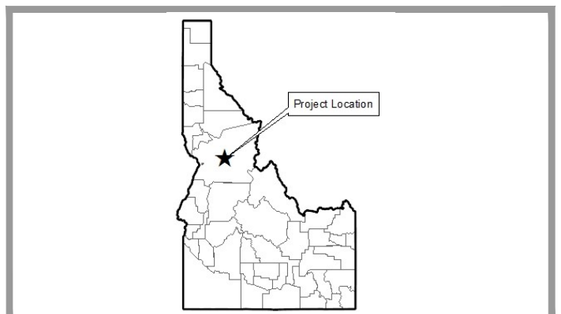
CLEAR CORRAL STWD - IRTC

NEZPERCE / CLEARWATER
MOOSE CREEK RANGER DISTRICT
IDAHO COUNTY

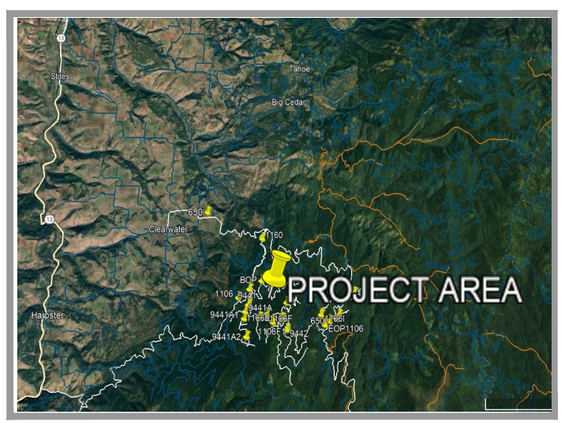
SHEET INDEX

PROJECT: PROJECT NUMBER
DATE: 3-25-2025

CONSTRUCTION PLANS

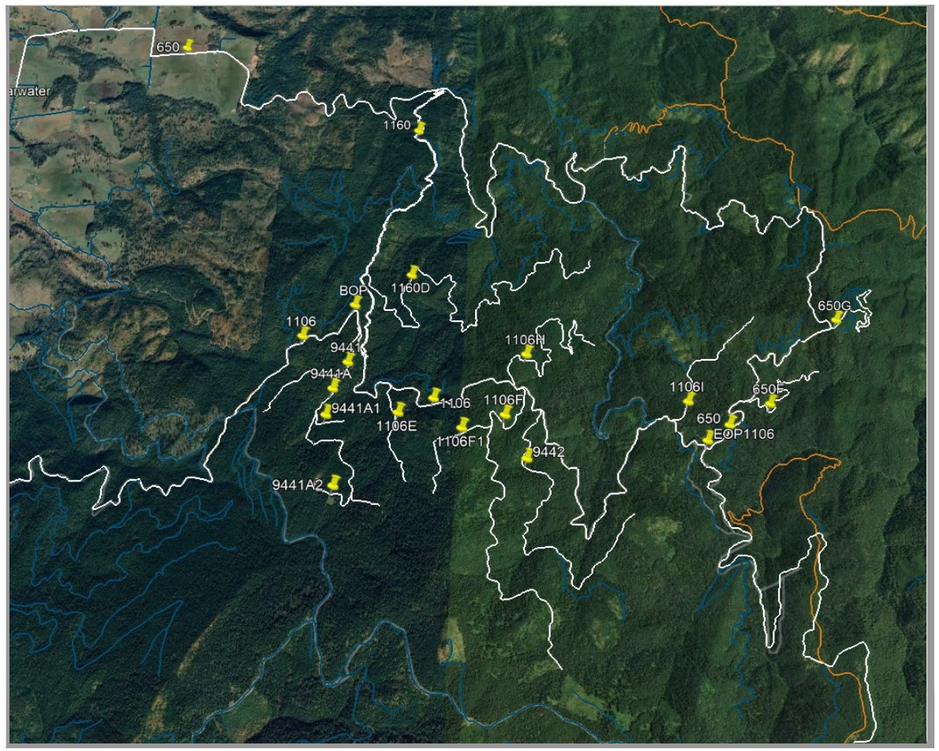


IDAHO INDEX MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

USER NOTES: (NO PLOT)
VERIFY THE MAP RETAINS CLARITY WHEN PRINTED IN BLACK AND WHITE



AREA MAP
NOT TO SCALE

DESIGNED BY:

PROJECT ENGINEER
NEZPERCE / CLEARWATER NATIONAL FOREST — DATE

RECOMMENDED BY:

DISTRICT RANGER
NEZPERCE / CLEARWATER NATIONAL FOREST — DATE

APPROVED BY:

FOREST ENGINEER
NEZPERCE / CLEARWATER NATIONAL FOREST — DATE

APPROVED BY:

FOREST SUPERVISOR
NEZPERCE / CLEARWATER NATIONAL FOREST — DATE

NO.	REVISION DESCRIPTION	BY	DATE
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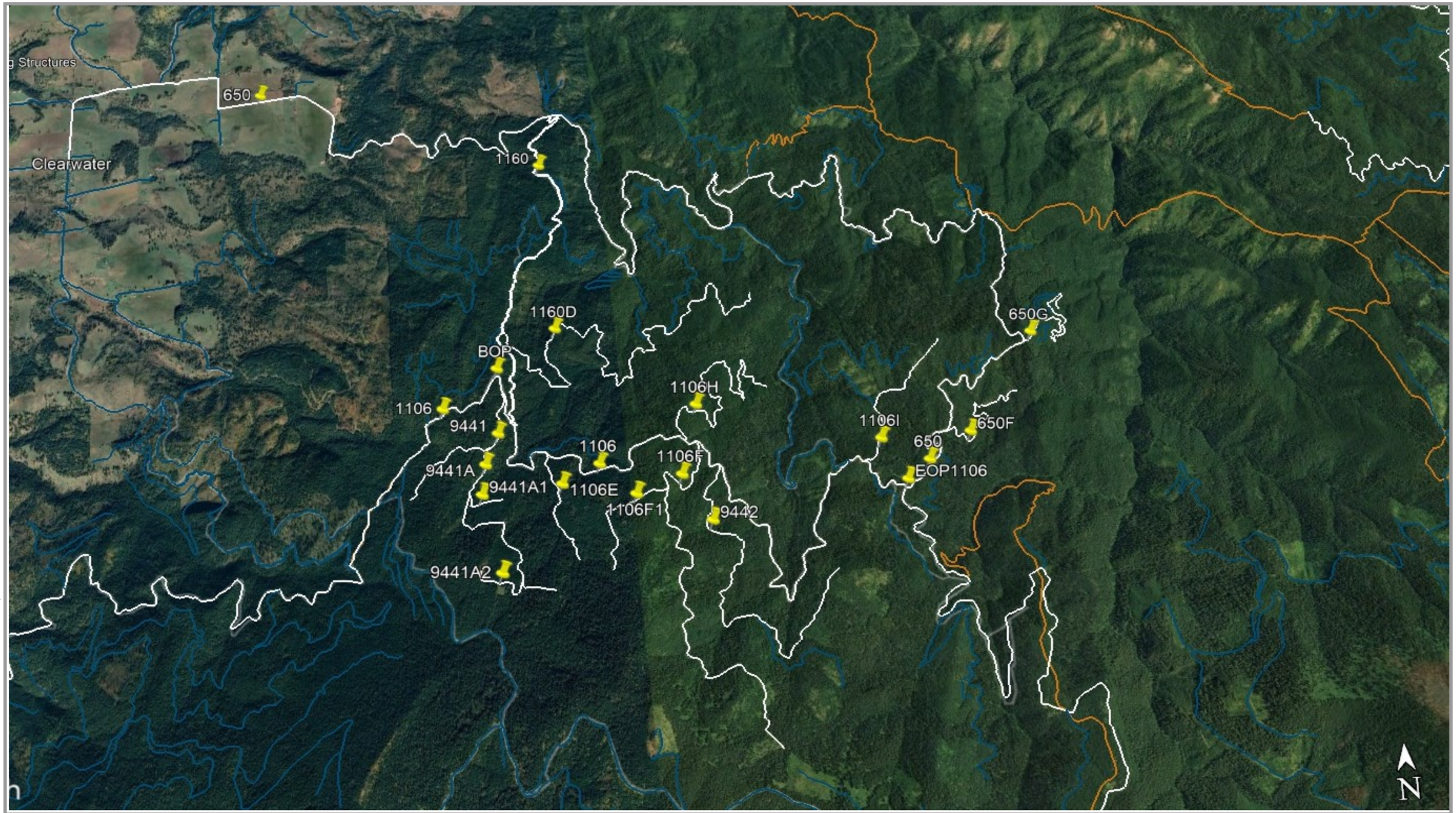
5			
6			

SET NO.

SHEET NO. **1**

D:\FY2025Projects\TimberSaleProjects_25\ClearCorralTS_25\Sheetset_ClearCorral\DWG\R01_Title.dwg



United States Department of Agriculture Forest Service	REGION 1 NORTHERN REGION	PROJECT NAME CLEAR CORRAL STWD - IRTC NEZ PERCE/CLEARWATER NATIONAL FOREST MOOSE CREEK RANGER DISTRICT	DRAWING TITLE **VICINITY MAP**	DATE 3-25--2025 / DESIGNER Weddle / CHECKED	DWG SHEET NO. 2	SHEET 2 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
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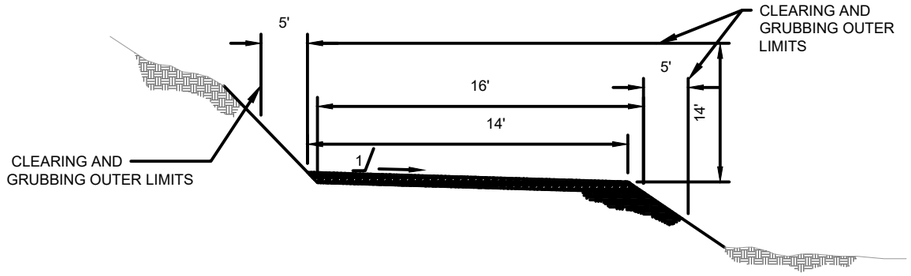
9/28/18 07:07 MARKL F:_CAD STANDARDS\AGENCY STANDARDS\FOREST SERVICE\NFS-CTB.DWG;

SUMMARY OF QUANTITIES

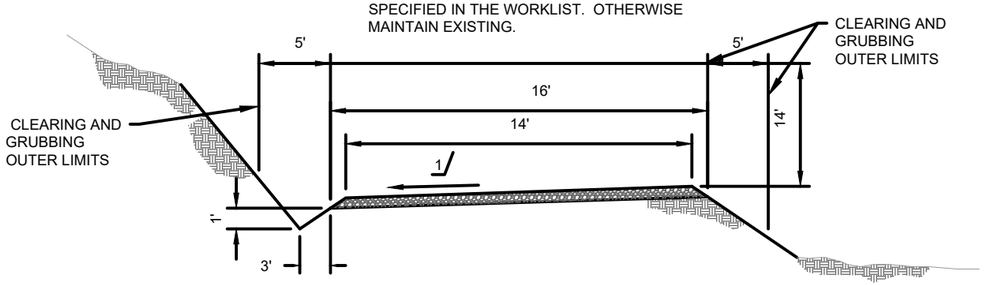
CLEAR CORRAL STWD - IRTC		ROAD NO.	650	650F	650G	1106	1106E	1106F	1106F1	1106H	1106I	1160	1160D	9441	9441A	9441A1	9441A2	9442
		MILES	1.80	0.55	1.09	4.98	0.61	0.61	0.74	1.14	0.28	1.69	1.55	0.46	1.16	0.26	0.32	1.44
		RECON/CON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON
ITEM NO	DESCRIPTION	UNITS	SUMMARY OF QUANTITIES															
15101	MOBILIZATION	LUMP SUM	0.02	0.01	0.05	0.08	0.08	0.06	0.03	0.07	0.02	0.30	0.08	0.01	0.06	0.06	0.01	0.06
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE												0.37	1.16		0.26	
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE		0.55	1.09		0.61		0.74		0.28			0.09		0.26	0.06	
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE						0.61		1.14		1.69	1.55					1.44
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH				1			1			1			3			
20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	CUBIC YARD				225				10								
20420A	DRAINAGE EXCAVATION, TYPE ROADSIDE DITCH, TOLERANCE CLASS A, COMPACTION METHOD 5	FOOT					200											
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	EACH								6					1			
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE			0.08	0.02	0.61					0.59	0.12				0.06	
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20		110	5				30								
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20		70	40	60	300	70	70	140	1782	30		60	50		200
30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	CUBIC YARD											10			10		
30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	CUBIC YARD											60			80		
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.80	0.55	1.01	4.96		0.61	0.74	1.14	0.28	1.10	1.43	0.46	1.16	0.26	0.26	1.44
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT				60	84			40		40			120			
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT					40		42	40						90		
60201C	36 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT											40					
60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	FOOT											40			50		
63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	EACH										1		1				
63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	EACH										1		1				



TYPICAL ROAD SECTION WITHOUT DITCH

NOT TO SCALE

1/ INSLOPE, OUTSLOPE, OR CROWN WHEN SPECIFIED IN THE WORKLIST. OTHERWISE MAINTAIN EXISTING.



TYPICAL ROAD SECTION WITH DITCH

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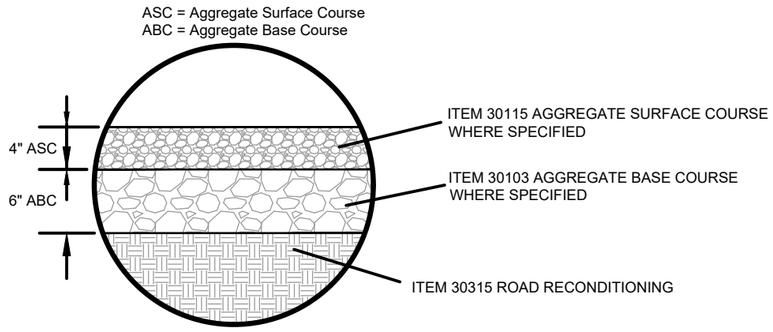
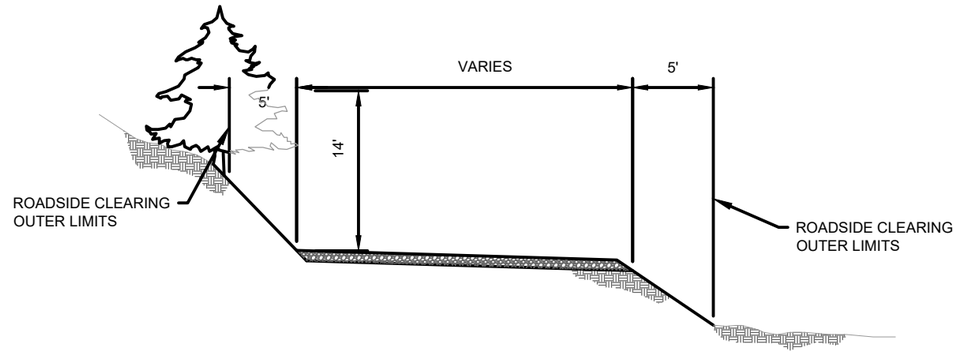


TYPICAL SECTION

ITEMS 30103, 30115, 30315



ROADSIDE CLEARING LIMITS WITHOUT DITCH

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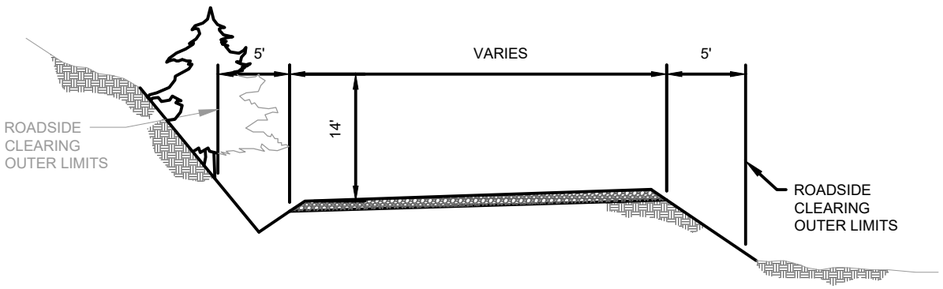
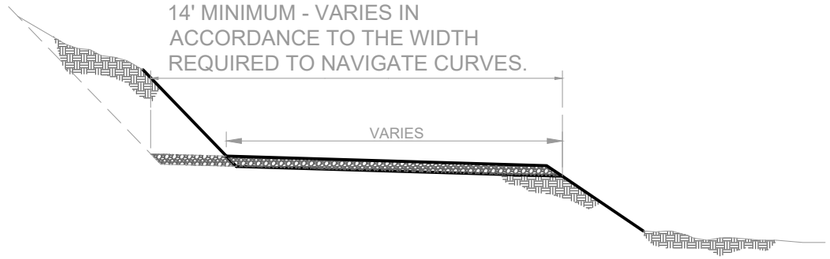


ROADSIDE CLEARING LIMITS WITH DITCH

NOT TO SCALE



ROAD WIDENING TYPICAL SECTION

United States Department of Agriculture
Forest Service

NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
TYPICAL SECTIONS

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		4	4 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
1			
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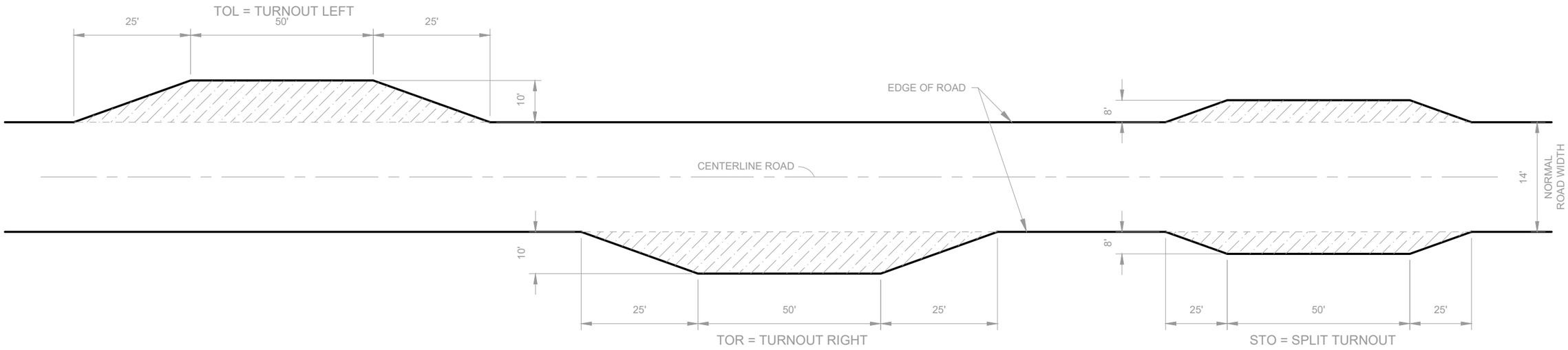
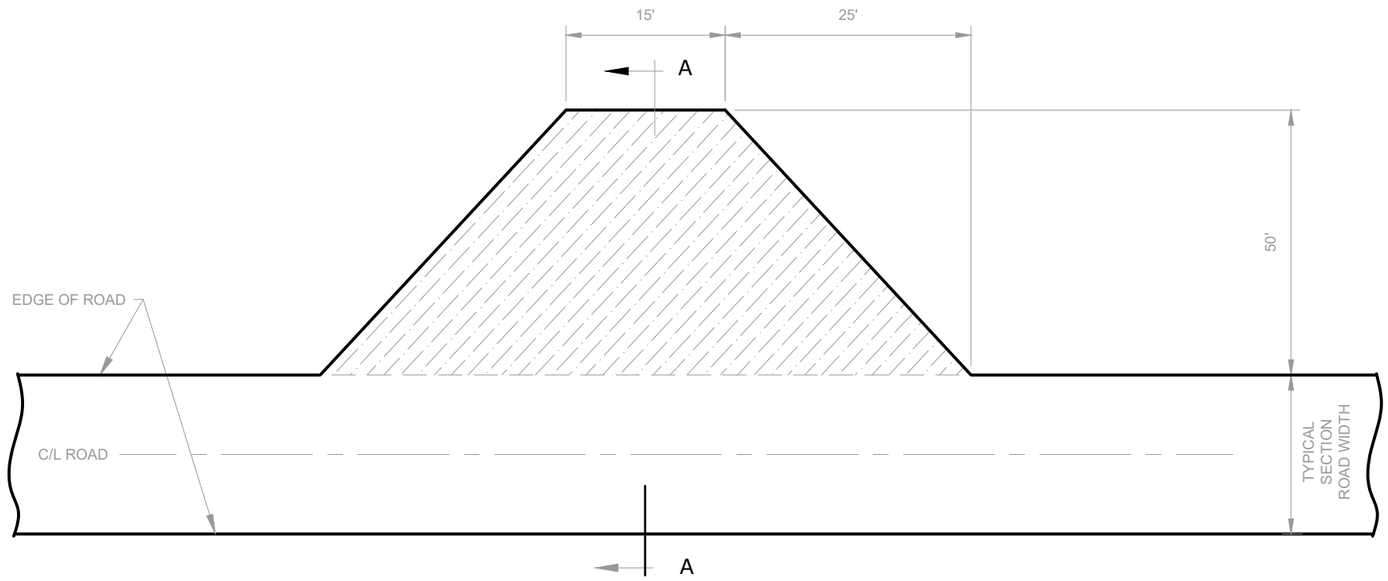
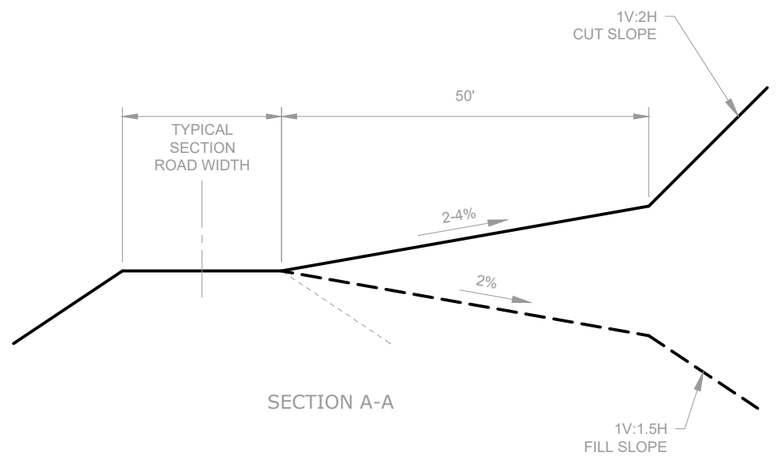


TURNOUT DETAIL

NOT TO SCALE





TURNAROUND DETAIL

NOT TO SCALE

9/28/18 07:07 MARKL F:_CAD STANDARDS\AGENCY STANDARDS\FOREST SERVICE\NFS-CTB.DWG;

United States Department of Agriculture
Forest Service

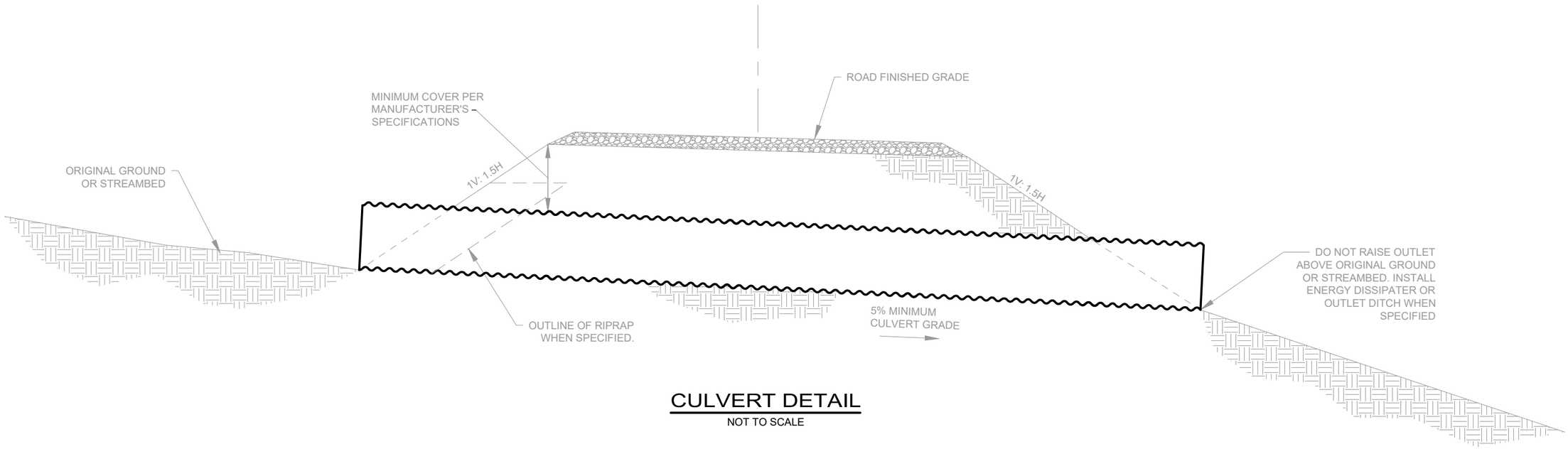
NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
TURNOUT AND TURNAROUND DETAILS

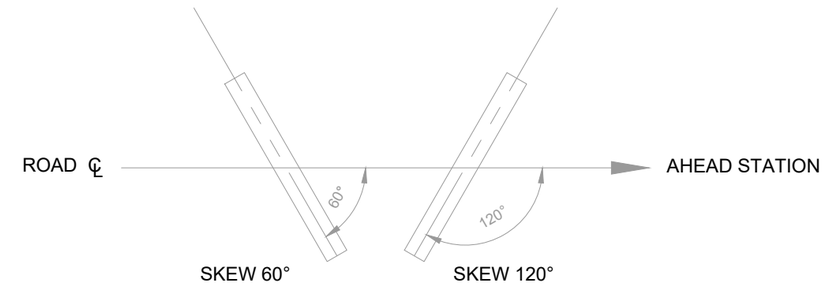
DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		5	5 OF 18

NO.	REVISION DESCRIPTION	BY	DATE



CULVERT DETAIL

NOT TO SCALE



SKEW DIAGRAM

NOT TO SCALE

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Forest Service

NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
CULVERT DETAIL

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
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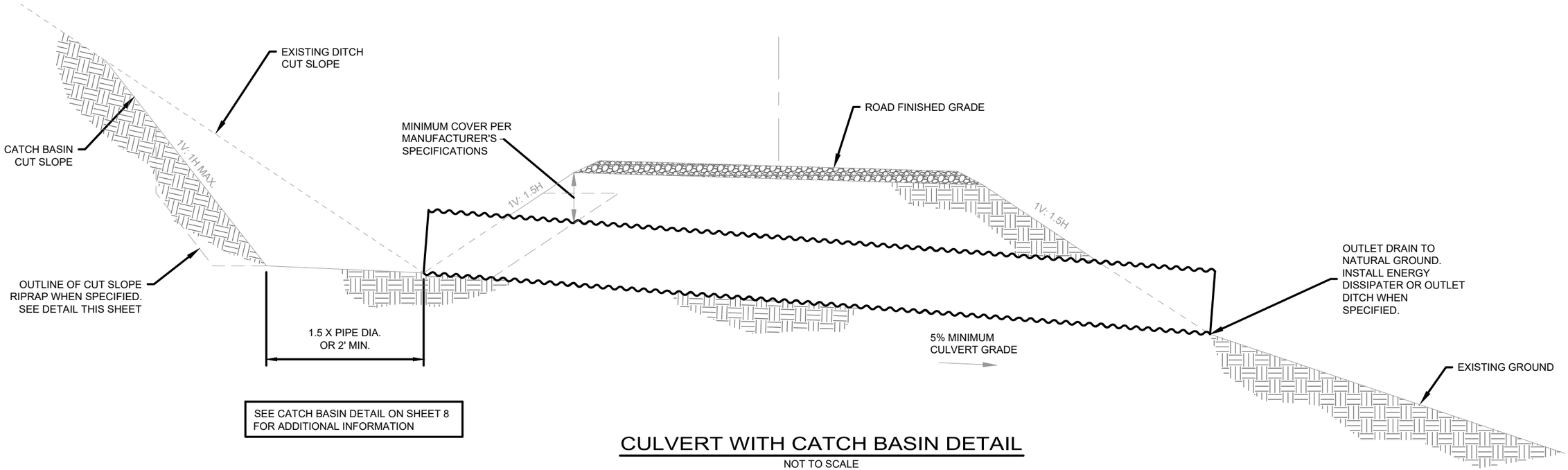
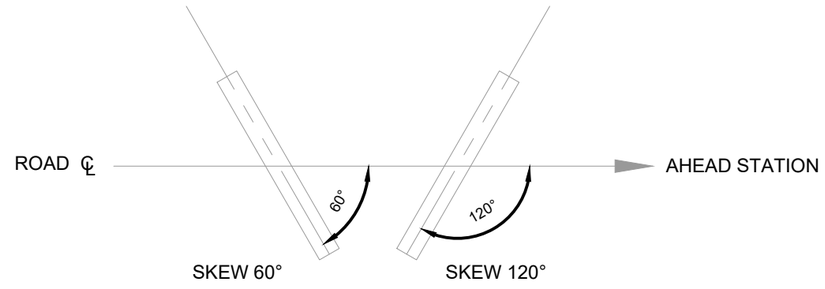


CULVERT WITH CATCH BASIN DETAIL

NOT TO SCALE



SKEW DIAGRAM

NOT TO SCALE

United States Department of Agriculture
Forest Service

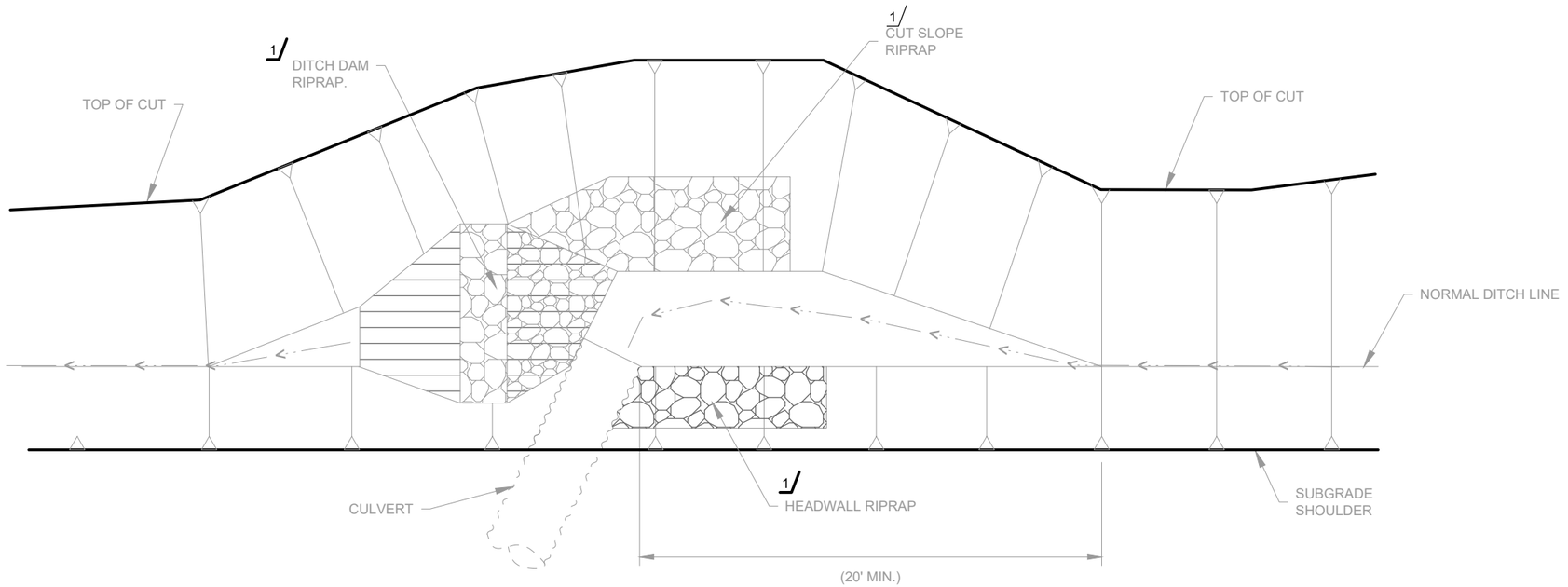
NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
CULVERT WITH CATCH BASIN DETAIL

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		7	7 OF 18

NO.	REVISION DESCRIPTION	BY	DATE

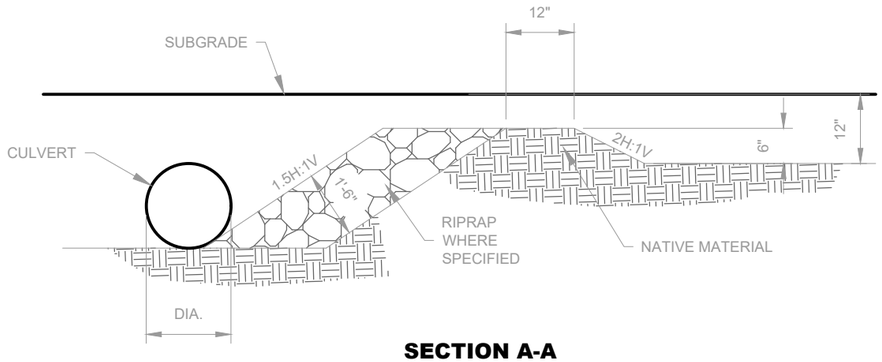


PLAN VIEW

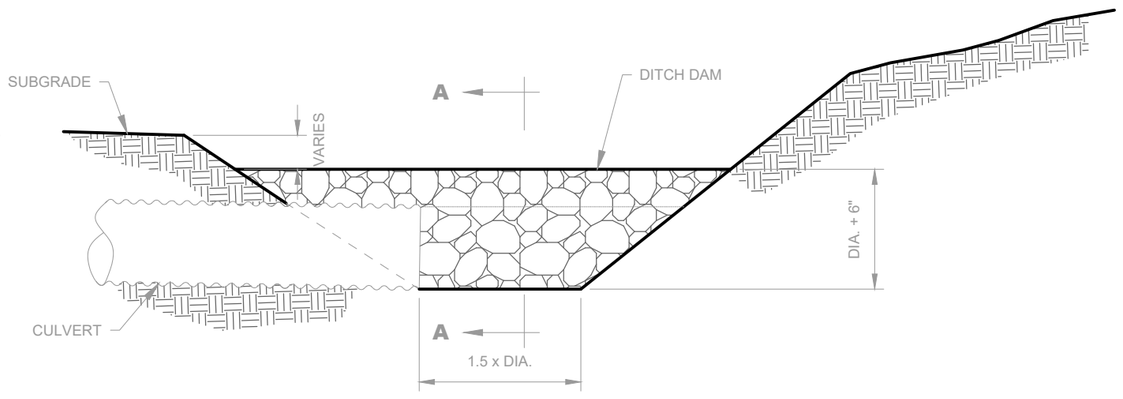
1/ INSTALL RIPRAP WHEN SPECIFIED

CATCH BASIN DETAIL

NOT TO SCALE



SECTION A-A



CATCH BASIN ELEVATION

USDA Forest Service — United States Department of Agriculture	NORTHERN REGION REGION 1	PROJECT NAME CLEAR CORRAL STWD - IRTC NEZPERCE/CLEARWATER MOOSE CREEK RANGER DISTRICT	DRAWING TITLE CATCH BASIN DETAIL	DATE: 3-25-2025 / DESIGNER: WEDDLE / CHECKED	DWG SHEET NO.: 8	SHEET: 8 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
1			
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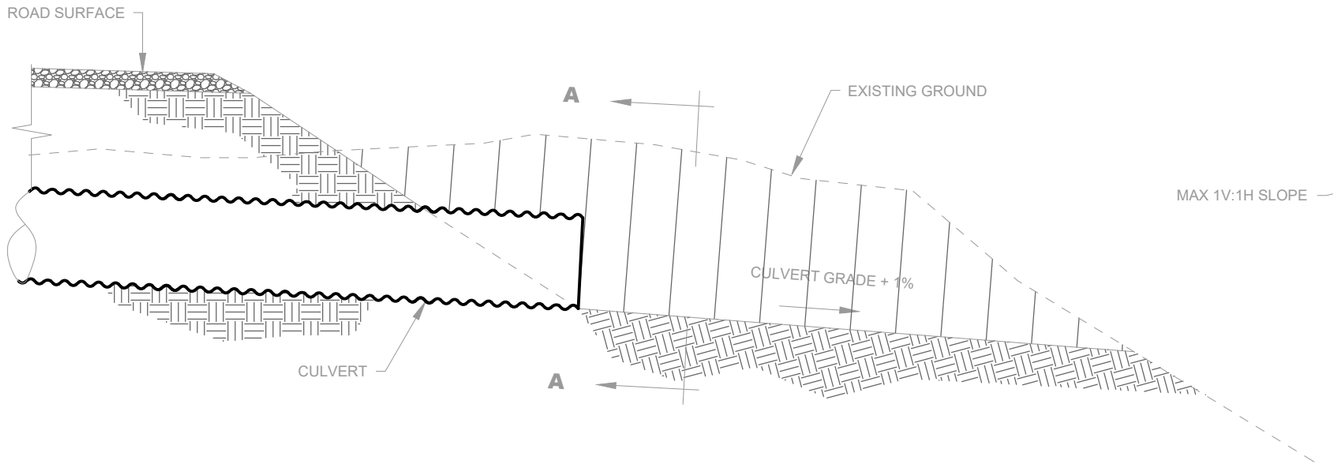
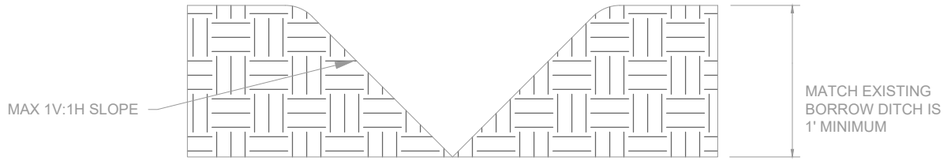
3			

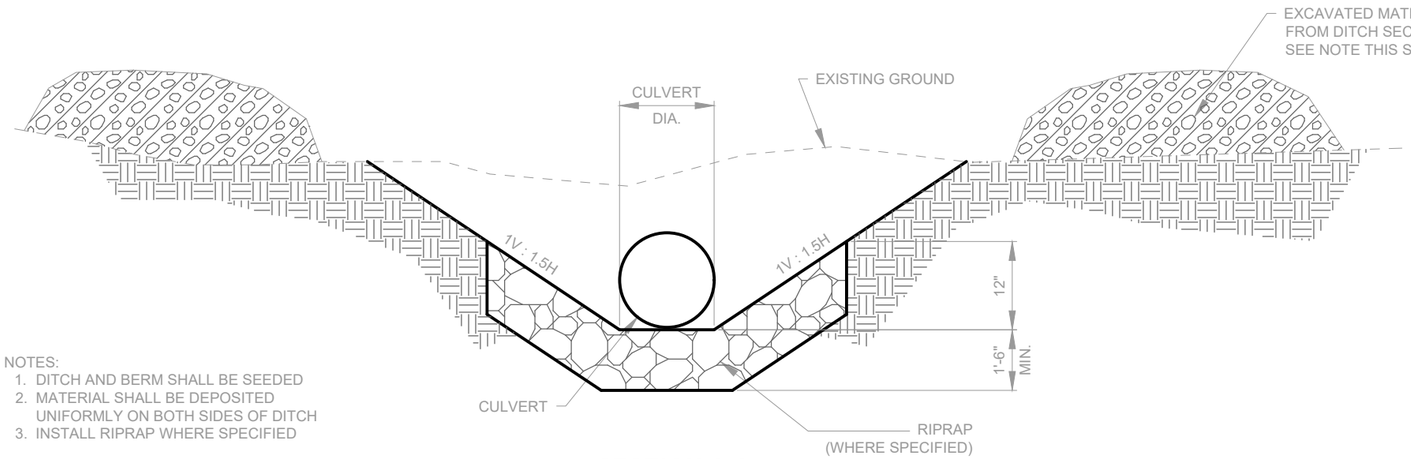
9/28/18 07:07 MARKL F:_CAD STANDARDS\AGENCY STANDARDS\FOREST SERVICE\NFS-CTB.DWG;



SECTION ALONG CENTERLINE CULVERT/OUTLET DITCH



LEAD OUT DITCH DETAIL



NOTES:
1. DITCH AND BERM SHALL BE SEEDED
2. MATERIAL SHALL BE DEPOSITED UNIFORMLY ON BOTH SIDES OF DITCH
3. INSTALL RIPRAP WHERE SPECIFIED

SECTION A-A

OUTLET DITCH

NOT TO SCALE

9/28/18 07:07 MARKL F:_CAD STANDARDS\AGENCY STANDARDS\FOREST SERVICE\NFS-CTB.DWG;

United States Department of Agriculture
Forest Service

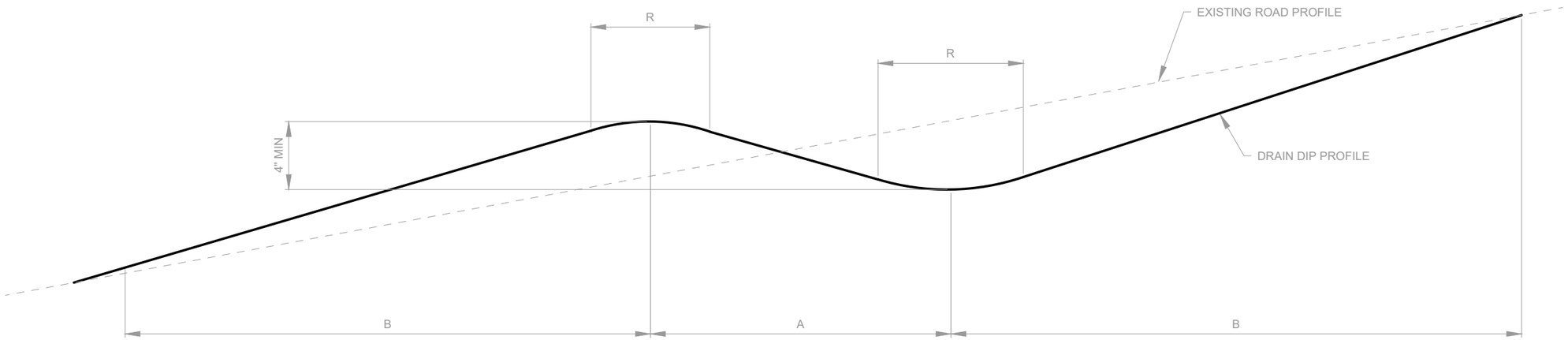
NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
OUTLET DITCH DETAIL

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		9	9 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			



DRAIN DIP

NOT TO SCALE

GRADE (%)	TYPE I			GRADE (%)	TYPE II			GRADE (%)	TYPE III		
	LENGTH	TAPER	ROUNDING		LENGTH	TAPER	ROUNDING		LENGTH	TAPER	ROUNDING
	A(ft)	B(ft)	R(ft)		A(ft)	B(ft)	R(ft)		A(ft)	B(ft)	R(ft)
0-5	30	30	30	0-5	20	25	20	0-5	10	15	10
6-9	30	50	30	6-9	20	40	20	6-9	10	20	10
10-12	30	60	30	10-12	20	50	20	10 - 30	10	10 - 30	10

NOTES:
1. CROSS SLOPE OF THE LOW POINT DRAINLINE SHALL BE 5%.
2. SKEW OF DRAINLINE SHALL BE 0-25 DEGREES.
3. WHEN RIPRAP IS SPECIFIED AT OUTLET, IT SHALL BE SHAPED TO ASSURE WATER GOES ONTO RIPRAP, NOT AROUND.
4. RIPRAP TOP ELEVATION SHALL BE AT TOP OF FINISHED OUTLET GRADE, NOT SUBGRADE.
5. TAPER LENGTHS SHALL BE WITHIN 10% OF LISTED LENGTHS.
6. UNLESS OTHERWISE SPECIFIED DO NOT INTERCEPT THE ROADWAY DITCH.

United States Department of Agriculture
Forest Service

NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
DRAIN DIP DETAIL

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		10	10 OF 18

NO.	REVISION DESCRIPTION	BY	DATE

SECTION 151 - ALL TEMPORARY SIGNAGE AND EQUIPMENT CLEANING FOR ENTRY ONTO FEDERAL LANDS ARE INCIDENTAL TO ITEM 15101.

SECTION 156 - SEE SUPPLEMENTAL SPECIFICATIONS FOR SIGNING, CLOSURES, AND OTHER PUBLIC TRAFFIC REQUIREMENTS.

SECTION 157 - SEE STANDARD AND SUPPLEMENTAL SPECIFICATION FOR SOIL EROSION CONTROL INCLUDING SCHEDULING AND DRAINAGE REQUIREMENTS.

SECTION 201 - SEE STANDARD, SUPPLEMENTAL SPECIFICATIONS, AND DRAWINGS FOR DETAILS.

SECTION 202 - SEE STANDARD, SUPPLEMENTAL SPECIFICATIONS, AND DRAWINGS FOR SELECTIVE CLEARING AND SPECIAL CLEARING AND GRUBBING REQUIREMENTS.

SECTION 203 - CULVERTS, OPEN TOP CROSS DRAINS, OR BELT DRAINS DESIGNATED FOR REMOVAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM FOREST SERVICE LANDS. CULVERTS AND OPEN TOP CROSS DRAINS SHALL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. SEE STANDARD AND SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION SLASH DISPOSAL METHODS.

SECTION 204 - EXCAVATION AND EMBANKMENT REQUIREMENTS ARE SHOWN IN THE SUPPLEMENTAL SPECIFICATIONS.

SECTION 301 - SEE STANDARD AND SUPPLEMENTAL SPECIFICATIONS. GOVERNMENT SOURCE IS TWIN RAVENS PIT, LOCATED IN SECTION 15, TOWNSHIP 31 NORTH, RANGE 5 EAST, BOISE MERIDIAN.

SECTION 303 - SEE STANDARD, SUPPLEMENTAL SPECIFICATIONS, AND DRAWINGS FOR ROADWAY RECONDITIONING REQUIREMENTS.

SECTION 602 - CULVERTS LARGER THAN 18" DIAMETER WILL HAVE A NEOPRENE GASKET INSTALLED AT ALL SPICES PER FP-14 707.17. DEWATERING AND EROSION CONTROL MEASURES ARE INDIRECTLY INCLUDED WITH ITEM 602. MINOR CLEARING AND GRUBBING MAY BE NECESSARY WHEN RECONSTRUCTING CATCH BASINS.

SECTION 622 - EQUIPMENT RENTAL HOURS MUST BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO USE.

SECTION 625 - SEED, MULCH, AND FERTILIZER SHALL BE APPLIED ON CUT AND FILL SLOPES, BORROW, OR WASTE AREAS OR ANY AREAS WHERE SOIL IS DISTURBED AS REQUIRED.

United States Department of Agriculture
Forest Service

REGION 1
NORTHERN REGION

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZ PERCE / CLEARWATER NATIONAL FOREST
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
PROJECT NOTES

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	CDW		11	11 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
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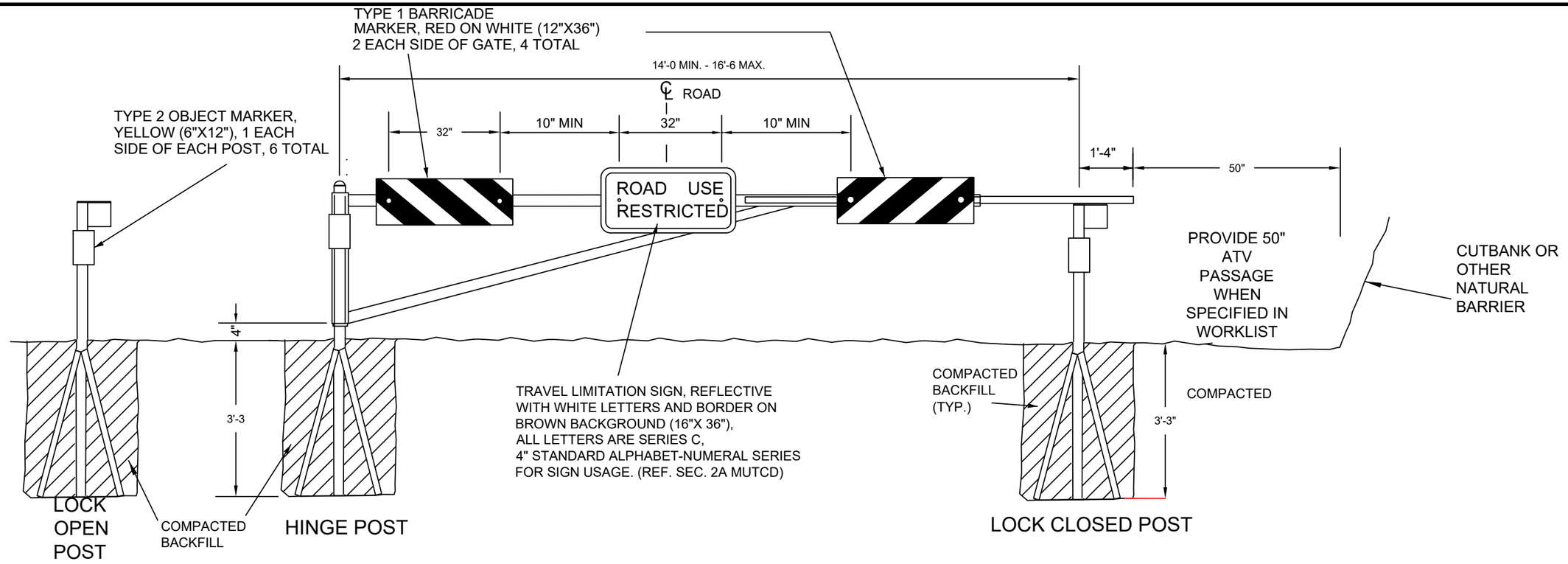
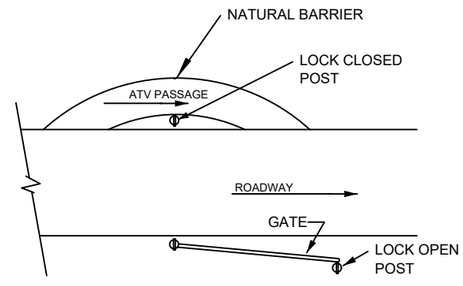


NOTES:

1. PIPE SIZES SHOWN ARE FOR STANDARD WEIGHT STEEL PIPE, CONFROMING TO ASTM A120.
2. WELDING SHALL BE DONE IN ACCORDANCE WITH THE BEST MODERN PRACTICE AND THEN APPLICABLE REQUIREMENTS OF AMERICAN WELDING SOCIETY D1.1.
3. PAINTING OF THE GATE AND ALL APPURTENANCES SHALL CONFORM TO SECTION 563 - PAINTING, SYSTEM 2, 3, OR 5. FINAL COAT TINT SHALL BE NATIONAL PARK SERVICE GREEN (FEDERAL STANDARD 595A COLOR # 14062).
4. ALL BACKFILL MATERIAL SHALL BE COMPACTED IN 6" LIFTS UNTIL THERE IS NO DEFORMATION.
5. STRUCTURAL PIPE AND STEEL PLATE SHALL CONFORM TO ASTM A 36.
6. CONTRACTOR WILL SUPPLY AND INSTALL SIGNS. SIGNS WILL MEET THE REQUIRMENTS OF SECTON 633. ALL WORK AND MATERIALS PERTAINING TO SECTION 633 - SIGNS, SHALL BE SUBSIDIARY TO SECTION 650 - ROAD CLOSURE DEVICES. NO SEPARATE PAYMENT WILL BE MADE.
7. WELD 3" CHANNEL IRON MOUNTING BRACKETS, DRILL ⅜" Ø HOLES AND US $\frac{5}{16}$" BOLTS WITH ANTITHEFT LOCKING NUTS FOR SIGN INTALLATIONS.
8. REMOVE EXISTING BARRIER AT GATE LOCATION. THE REMOVED ITEMS BECOME PROPERTY OF THE CONTRACTOR AND MUST BE REMOVED FROM FOREST LAND AND DISPOSED OF IN A LEGAL MANNER.
9. FOR ROADS RESTRICTED TO ALL MOTORIZED VEHICLES, PLACE POSTS NEXT TO BANK OR OTHER NATURAL OBSTRUCTION TO PREVENT VEHICLES FROM DRIVING AROUND GATE. MAXIMUM DISTANCE 12" FROM POST TO CUT BANK OR NATURAL OBSTRUCTION. IN LOCATIONS WHERE ROAD WIDTH OR NATURAL OBSTRUCTIONS DO NOT ACCOMODATE THIS, PURCHASER SHALL PLACE LARGE BOULDERS OR ROOTWADS IN ORDER TO RESTRICT MOTORIZED TRAFFIC. WHERE ROAD IS RESTRICTED TO FULL SIZE VEHICLES ONLY, LEAVE SPACE OF 50" FROM THE POST TO THE CUT BANK OR OTHER NATURAL OBSTRUCTION.



PLAN VIEW

United States Department of Agriculture
Forest Service

01 REGION ONE	PROJECT NAME: CLEAR CORRAL STWD - IRTC; NEZ PERCE - CLEARWATER NATIONAL FORESTS; MOOSE CREEK RANGER DISTRICT	DRAWING TITLE: PIPE GATE	DATE: 3-25-2025	DESIGNER	CHECKED

NO.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			

DWG SHEET NO. 12

SHEET 12 OF 18

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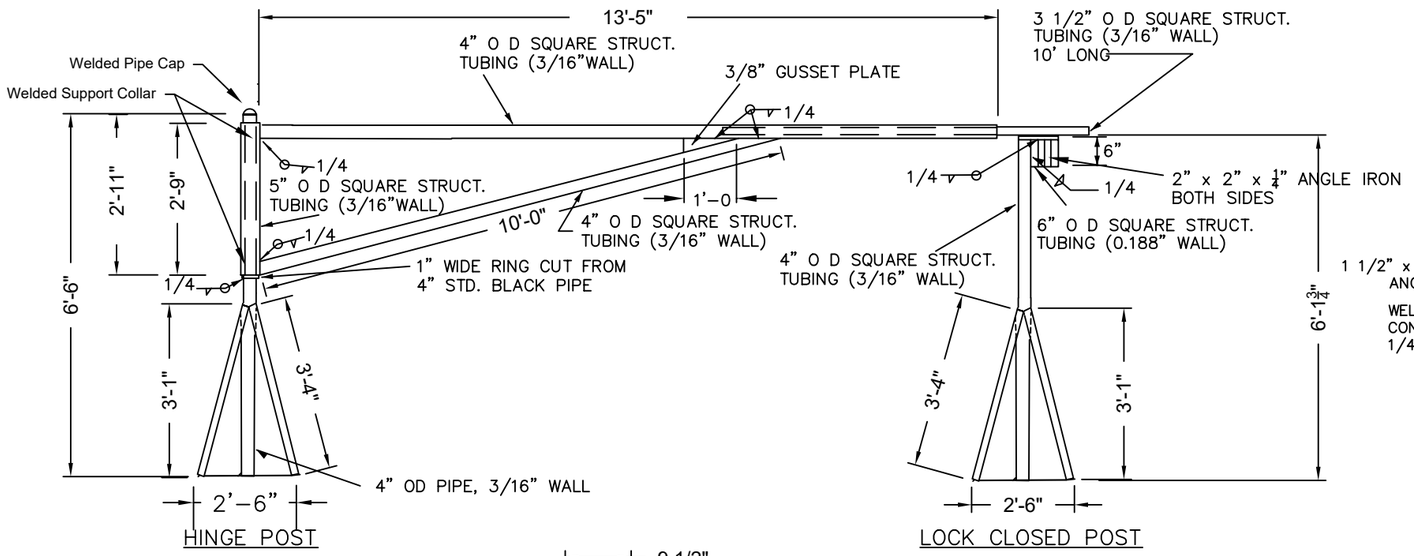

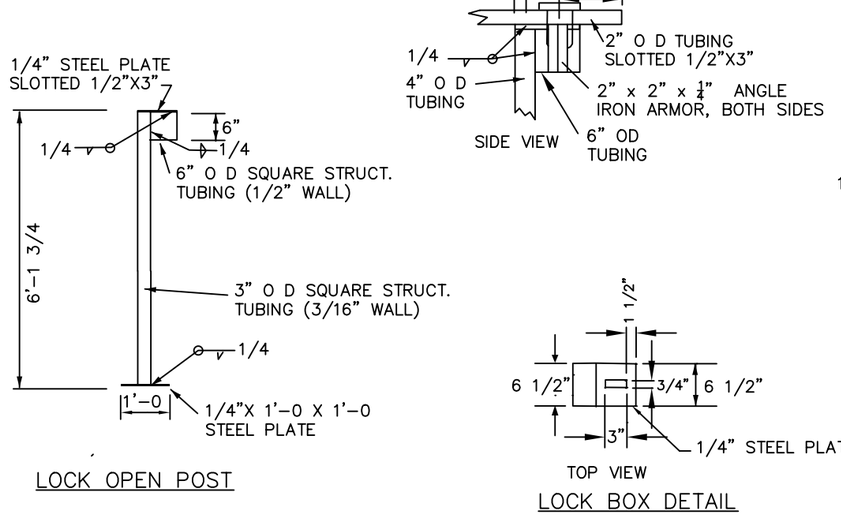

CONSTRUCT LOCKING DEVICE FROM CARBON STEEL
WELDLESS OBLONG LINKS.
TWO SINGLE LINKS AND ONE DOUBLE (WELDED) LINK
REQUIRED FOR EACH LOCKING SYSTEM. CHAIN WELDED TO GATE SECURING TANG

MULTIPLE LOCKING SYSTEM

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United States Department of Agriculture
Forest Service

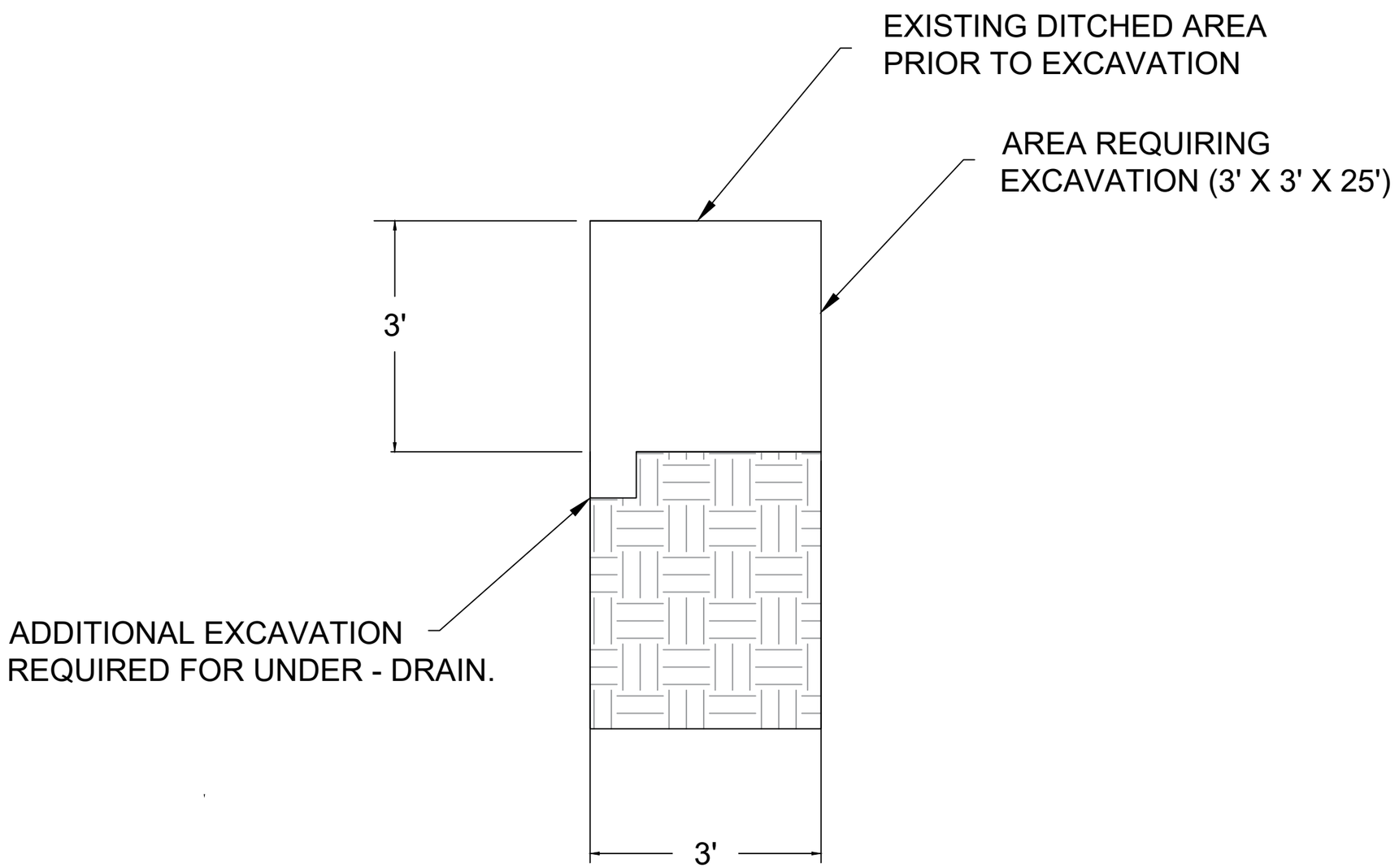
01
REGION ONE

CLEAR CORRAL STWD - IRTC
NEZ PERCE - CLEARWATER NATIONAL FORESTS
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
PIPE GATE (2)

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025			13	13 OF 18

NO.	REVISION DESCRIPTION	BY	DATE



United States Department of Agriculture
Forest Service

NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER NATIONAL FOREST
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
EXCAVATION

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025			**14**	14 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
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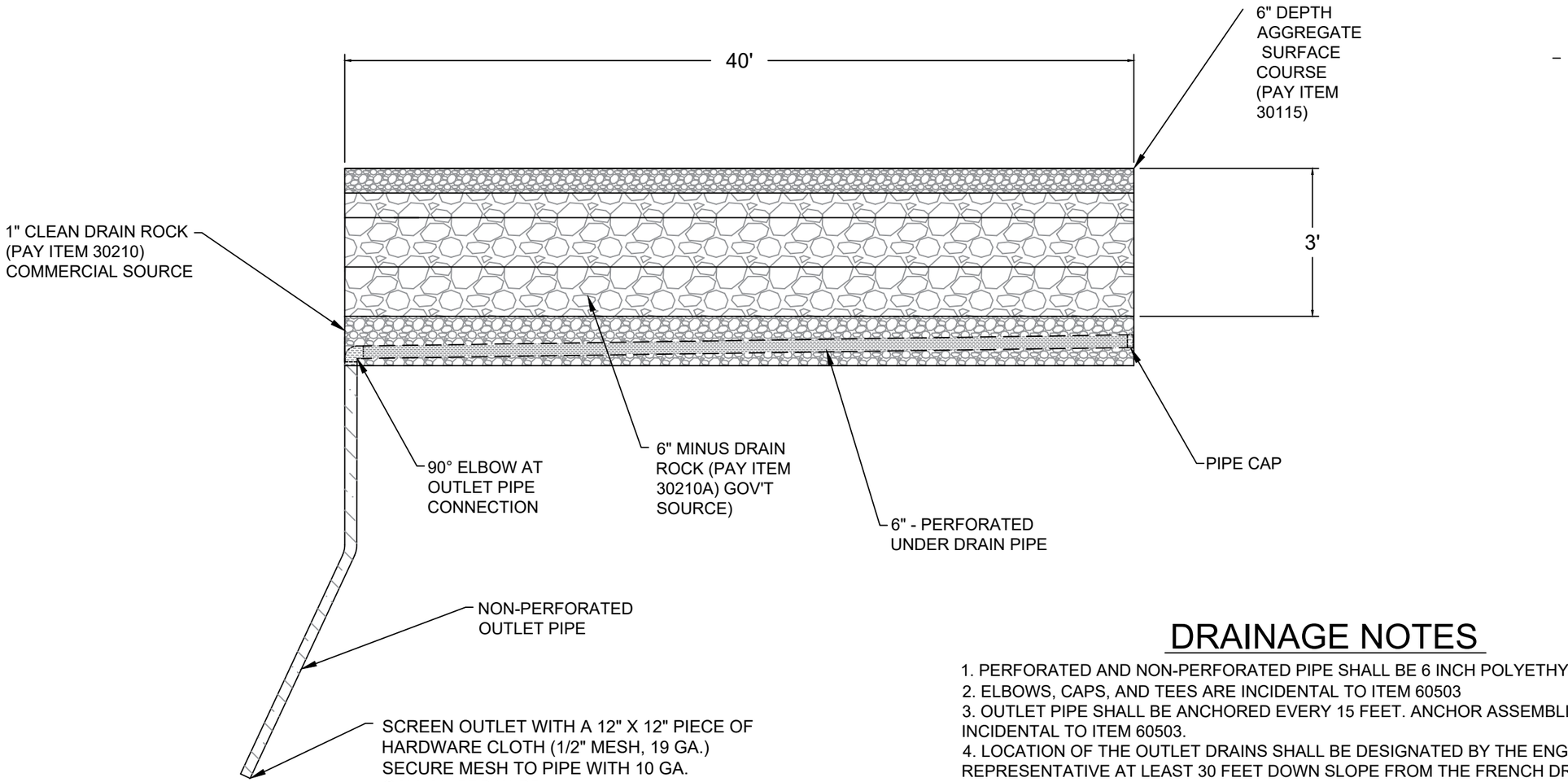

DRAINAGE NOTES

1. PERFORATED AND NON-PERFORATED PIPE SHALL BE 6 INCH POLYETHYLENE.
2. ELBOWS, CAPS, AND TEES ARE INCIDENTAL TO ITEM 60503
3. OUTLET PIPE SHALL BE ANCHORED EVERY 15 FEET. ANCHOR ASSEMBLIES ARE INCIDENTAL TO ITEM 60503.
4. LOCATION OF THE OUTLET DRAINS SHALL BE DESIGNATED BY THE ENGINEER'S REPRESENTATIVE AT LEAST 30 FEET DOWN SLOPE FROM THE FRENCH DRAIN AND SHALL HAVE POSITIVE DRAINAGE.
5. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGING THE PREFABRICATED UNDER-DRAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED TO DRAINAGE COMPONENTS SHALL BE REPAIRED OR REPLACED AS APPROVED BY THE CONTRACTING OFFICER.

United States Department of Agriculture
Forest Service

NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER MOOSE
CREEK RANGER DISTRICT

DRAWING TITLE
FRONT TYPICAL

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		15	15 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
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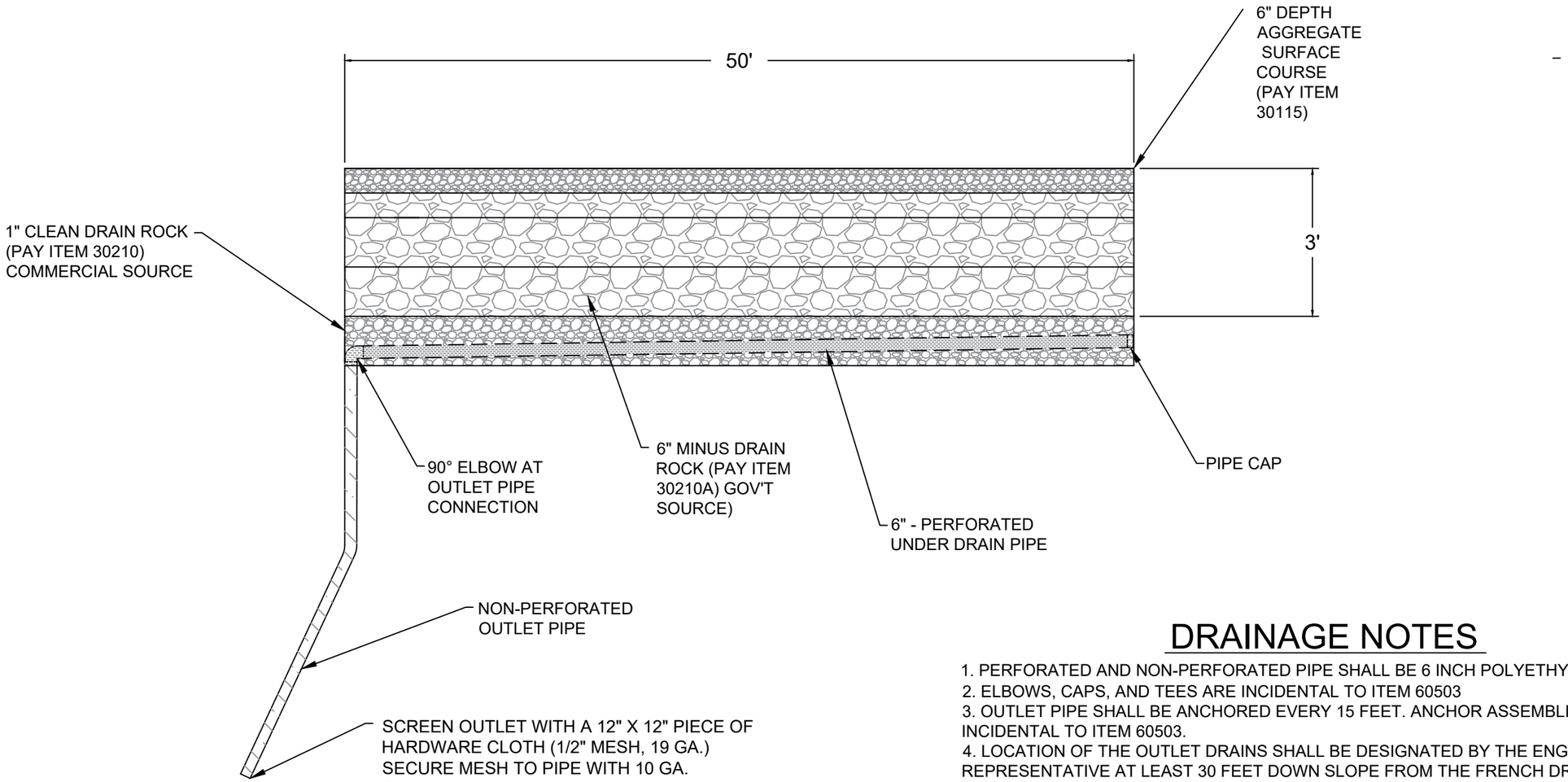

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United States Department of Agriculture
Forest Service

NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
FRONT TYPICAL

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		16	16 OF 18

NO.	REVISION DESCRIPTION	BY	DATE
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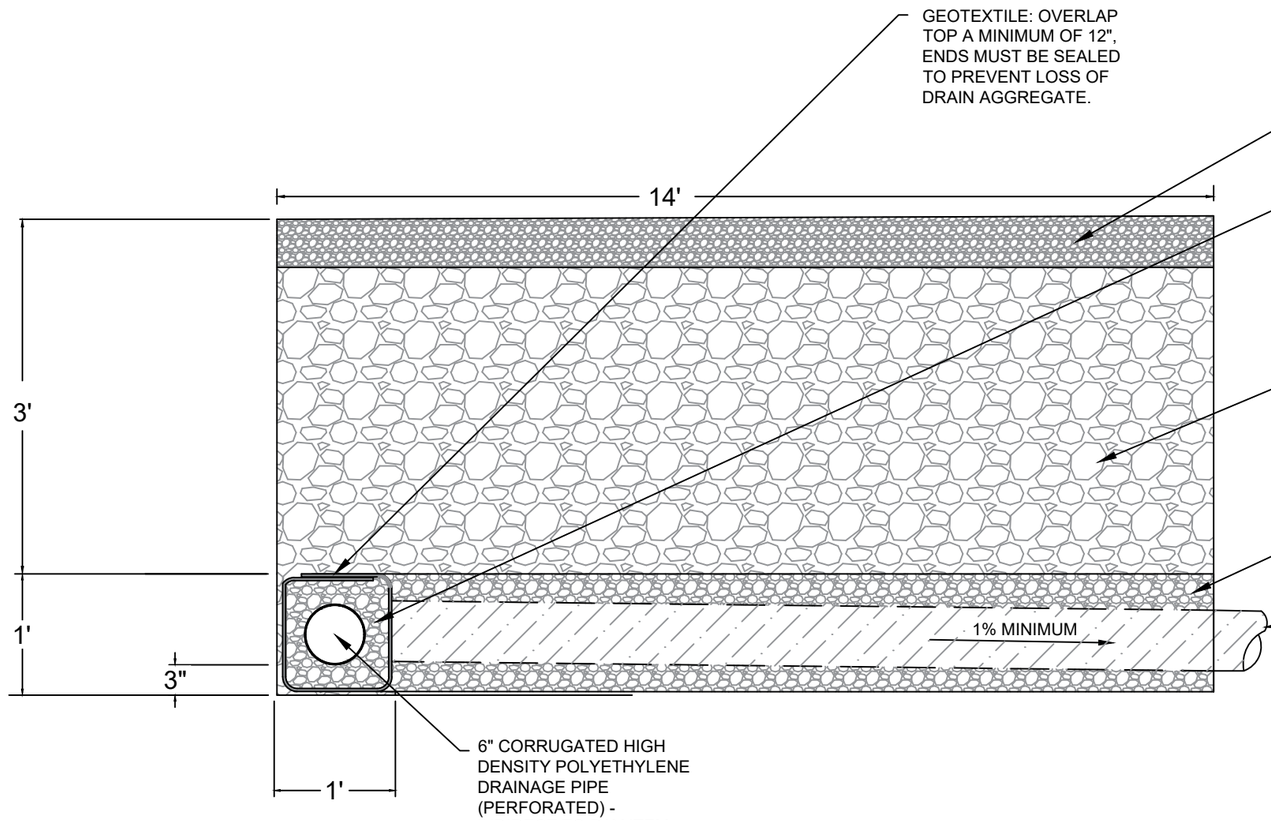
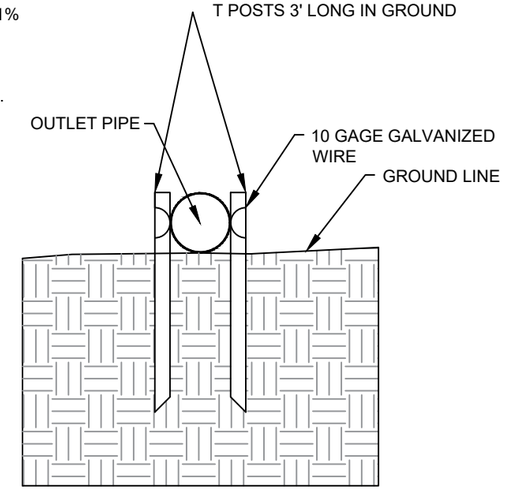


UNDER-DRAIN DETAIL

NOT TO SCALE



ANCHOR ASSEMBLY

NOT TO SCALE

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United States Department of Agriculture
Forest Service

NORTHERN REGION
REGION 1

PROJECT NAME
CLEAR CORRAL STWD - IRTC
NEZPERCE/CLEARWATER
MOOSE CREEK RANGER DISTRICT

DRAWING TITLE
DETAILS

DATE	DESIGNER	CHECKED	DWG SHEET NO.	SHEET
3-25-2025	WEDDLE		17	17 OF 18

NO.	REVISION DESCRIPTION	BY	DATE

GENERAL NOTES

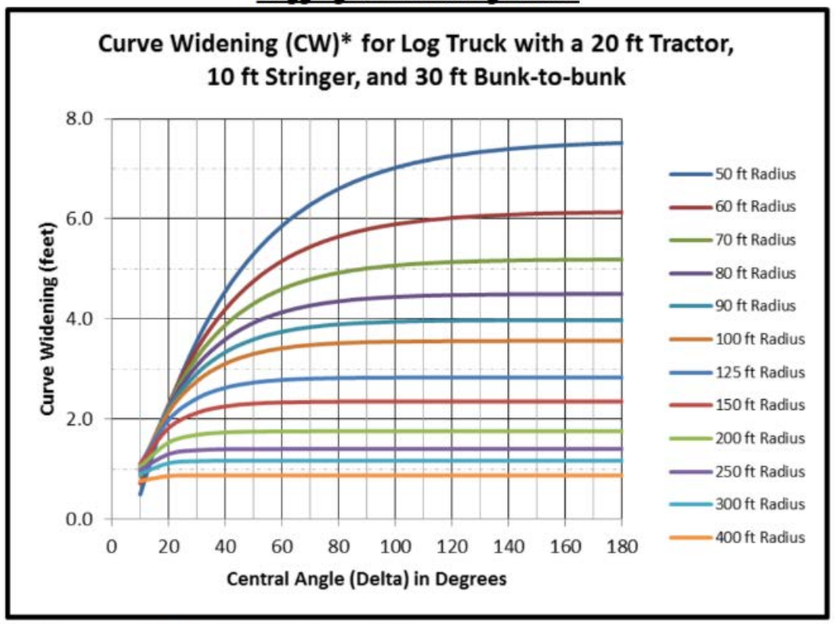
1. SPECIFICATIONS: CONSTRUCT THE PROJECT IN COMPLIANCE WITH FEDERAL HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROAD AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-14) AND APPLICABLE FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS (FSSS).

2. PROTECTION OF NATURAL RESOURCES: PROTECT ALL TREES AND LAND AREAS NOT LOCATED WITHIN THE PROJECT CONSTRUCTION OR EARTHWORK LIMIT. EXERCISE CARE IN AREAS TO AVOID UNNECESSARY DAMAGE TO NATURAL VEGETATION.

3. SITE CONDITIONS AND QUANTITIES:
ALL EXISITING CONDITIONS ARE TO BE VERIFIED IN THE FIELD PRIOR TO BEGINNING OF WORK. ANY ADJUSTMENTS TO THE DRAWINGS OR SPECIFICATIONS SHALL BE MADE AS DIRECTED BY THE CONTRACTING OFFICER. IF DISCREPANCIES ARE FOUND IN THE FIELD COMPARED TO THE DRAWINGS, CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY.

CURVE WIDENING REQUIREMENTS (LOG TRUCK)

Logging Truck Configuration



Add curve widening (CW) to lane width.

FRENCH DRAIN NOTES:

WORK: UNDER THE SPECIFICATIONS OF SECTION 204 THE CONTRACTOR IS TO CONSTRUCT A UNDER DRAIN TO BE BACKFILLED WITH 6" MINUS DRAIN ROCK IN LIFTS NOT EXCEEDING 12" IN COMPACTED DEPTH WITH THE FINAL LIFT BEING 6" OF AGGREGATE SURFACE COURSE. A GEOCOMPOSITE UNDER-DRAIN TYPE SYSTEM IS ALSO TO BE CONSTRUCTED AS SHOWN IN THE DRAWINGS

EXCAVATION: ALL UNSUITABLE ON-SITE MATERIALS IN THE AREA OF THE UNDER DRAIN SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE .

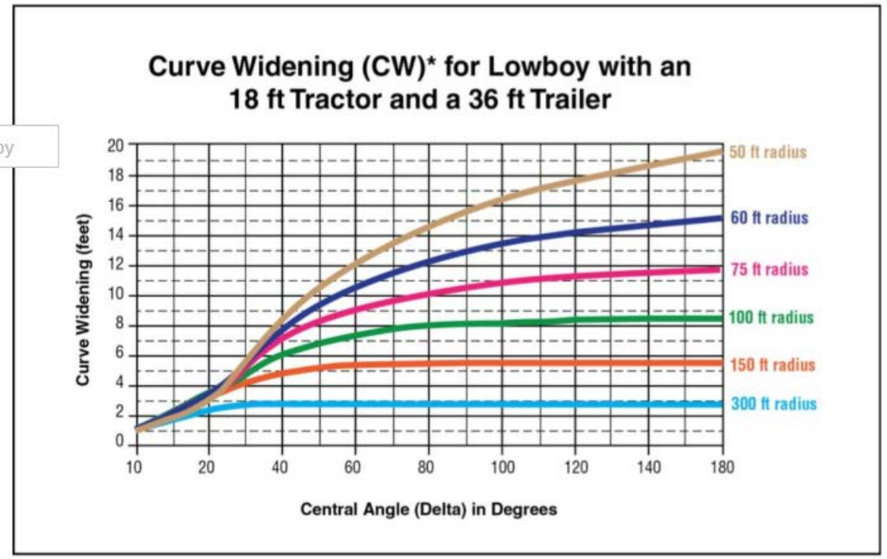
FOUNDATION APPROVAL: FOLLOWING EXCAVATION AND FOUNDATION PREPARATION THE FOUNDATION SHALL BE AT THE SPECIFIED GRADE AND SMOOTH AND COMPACTED ACCORDING TO CONTRACT SPECIFICATIONS. FOUNDATION SHALL BE APPROVED BY THE ENGINEER'S REPRESENTATIVE PRIOR TO DRAINAGE INSTALLATIONS.

BACKFILLING: BACKFILLING SHALL PROGRESS SIMULTANEOUSLY WITH THE PLACEMENT OF THE TIERS. EACH LAYER OF BACKFILL SHALL BE COMPACTED TO NO FURTHER VISUAL DISPLACEMENT IN LAYERS NOT EXCEEDING 12 INCHES (COMPACTED). THE CONTRACTOR SHALL DECREASE THE LIFT THICKNESS IF NECESSARY TO OBTAIN SUITABLE COMPACTION, ORGANIC MATERIAL AND ROCKS GREATER THAN 8 INCHES IN DIAMETER SHALL BE REMOVED FROM THE BACKFILL.

CONTRACTOR SHALL EXERCISE CARE TO AVOID DAMAGING THE GEOGRID AND GEOCOMPOSITE DRAIN SYSTEM DURING OPERATIONS. ANY MATERIALS DAMAGED DURING CONSTRUCTION OPERATIONS WILL NEED TO BE REPAIRED OR REPLACED AS DIRECTED BY THE CONTRACTING OFFICER.

CURVE WIDENING REQUIREMENTS (LOW BOY)

Lowboy Configurations



* Add curve widening (CW) to lane width

USDA Forest Service — United States Department of Agriculture	NORTHERN REGION REGION 1	PROJECT NAME CLEAR CORRAL STWD - IRTC NEZPERCE/CLEARWATER MOOSE CREEK RANGER DISTRICT	DRAWING TITLE NOTES	DATE 3-25-2025 / DESIGNER / CHECKED	DWG SHEET NO. 18	SHEET 18 OF 18

NO.	REVISION DESCRIPTION	BY	DATE

CLEAR CORRAL STWD - IRTC 2025- FSSS

Forest Service Supplemental Specifications

Table of Contents

Preface

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-14 for construction of National Forest System Roads.

101 - Terms¸ Format¸ and Definitions

101.01_National_3_15_2017

Add the following paragraph to Subsection 101.01:

101.01 Meaning of Terms.

Delete all references to the FAR (Federal Acquisition Regulations) in the specifications when incorporating into 2400-6(T) Timber Sale or 2400-13(T) Stewardship contracts.

101.01_National_11_9_2016

Add the following paragraph to Subsection 101.01:

101.01 Meaning of Terms.

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.03_National_11_9_2016

Add the following to Subsection 101.03:

101.03 Abbreviations.

(a) Acronyms.

AGAR — Agriculture Acquisition Regulations

AFPA — American Forest and Paper Association

FSAR — Forest Service Acquisition Regulations

MSHA — Mine Safety and Health Administration

NESC — National Electrical Safety Code

WCLIB — West Coast Lumber Inspection Bureau

(f) Miscellaneous unit abbreviations.

MP	—	milepost	location
ppm	—	parts per million	volume
STA		station	location

Make the following changes to Subsection 101.04:

101.04 Definitions.

Delete these definitions and replace the following:

Bid Schedule — The Schedule of Items.

Bridge — A structure, including supports, erected over a depression or an obstruction such as water along a road, a trail, or a railway and having a deck for carrying traffic or other loads.

Contractor — The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the "Purchaser".

Culvert — Any structure with a bottom, regardless of fill depth, depth of invert burial, or presence of horizontal driving surface, or any bottomless (natural channel) structure with footings that will not have wheel loads in direct contact with the top of the structure.

Drawings — (Public Works Contracts) Design sheets or fabrication, erection, or construction details submitted to the CO by the Contractor according to FAR Clause 52.236-21 Specifications and Drawings for Construction. Also refers to submissions and submittals.

Notice to Proceed — (Public Works Contracts) Written notice to the Contractor to begin the contract work.

Right-of-Way — A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Solicitation—(Public Works Contracts) The complete assembly of documents (whether attached or incorporated by reference) furnished to prospective bidders.

Add the following definitions:

Adjustment in Contract Price — "Equitable adjustment," as used in the Federal Acquisition Regulations, or "construction cost adjustment," as used in the Timber Sale Contract, as applicable.

Change — "Change" means "change order" as used in the Federal Acquisition Regulations, or "design change" as used in the Timber Sale Contract.

Forest Service — The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line — A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road — Temporary construction access built along the route of the project.

Purchaser — The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

Protected Streamcourse — A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

Road Order — An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

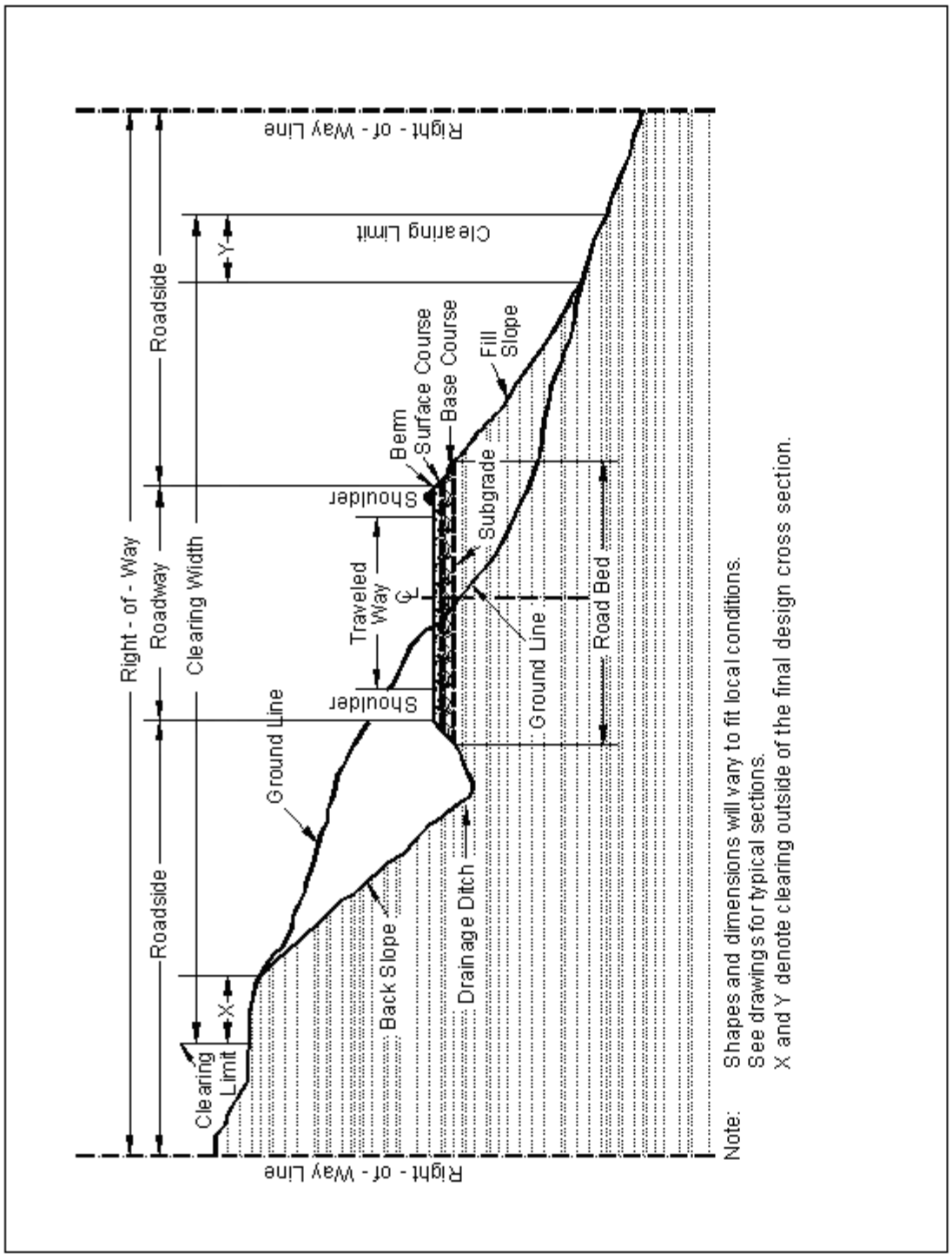
Shop Drawings — (Timber and Stewardship Contracts) Referred to as "Drawings" in FP-14, include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, lists or tables, performance and test data, and similar materials furnished by Purchaser to explain in detail specific portions of the work required by the contract.

Utilization Standards —

The minimum size and percent soundness of trees described in Public Works contract specifications or Timber Sale and IRTC contract provisions to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



102 - Bid¸ Award¸ and Execution of Contract

Delete Section 102 in its entirety.

Delete Section 102.

103 - Scope of Work

Delete all of Section 103 except Subsection 103.01 Intent of Contract.

Delete Subsections 103.02, 103.03, 103.04, 103.05.

104 - Control of Work

104.00_National_11_9_2016

Delete Subsections 104.01, 104.02, and 104.04.

Delete Subsections 104.01, 104.02, 104.04.

104.03_National_3_3_2021

Delete Subsection 104.03 and replace with the following:

104.03 Specifications and Drawings.

Refer to B(T) 5.211 in the 2400-6(T)) or the 2400-13(T) contracts for requirements under this subsection.

104.06_National_11_9_2016

Add the following to Subsection 104.06:

104.06 Use of Roads by Contractor.

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

105 - Control of Material

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. Place excess material safely at government-approved location, at no additional cost to government.

106 - Acceptance of Work

106.01_National_7_18_2017

Delete Subsection 106.01 and replace with the following:

106.01 Conformity with Contract Requirements.

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove, repair, or replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted. Removing, repairing, or replacing work; providing temporary traffic control; and any other related work to accomplish conformity will be at no cost to the Government.

(a) Disputing Government test results. If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:

1. Sampling method;
2. Number of samples;
3. Sample transport;

4. Test procedures;
5. Testing laboratories;
6. Reporting;
7. Estimated time and costs; and
8. Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

1. Have the work accepted at a reduced price; or
2. Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

Delete Subsection 106.02 and replace with the following:

106.02 Visual Inspection.

Acceptance is based on visual inspection of the work for compliance with the specific contract requirements. Use prevailing industry standards in the absence of specific contract requirements or tolerances.

Delete Subsection 106.07.

106.07 Partial and Final Acceptance.

107 - Legal Relations and Responsibility to the Public

107.05_National_7_18_2017

Delete Subsection 107.05.

Delete Subsection 107.05.

107.08_National_3_3_2021

Delete Subsection 107.08 and replace with the following:

107.08 Sanitation, Health, and Safety.

Refer to specific provisions under B(T) 6.0 in the 2400-6(T) or the 2400-13(T) contracts for requirements under this subsection.

108 - Prosecution and Progress

Delete Section 108 in its entirety.

Delete Section 108.

109 - Measurement and Payment

109.00_National_11_9_2016

Delete Subsections 109.06, 109.07, 109.08, and 109.09:

Delete Subsections 109.06, 109.07, 109.08, 109.09.

109.01_National_2_22_2019

Delete the third paragraph and Table 109-1 of Subsection 109.01 and replace with the following:

109.01 Measurement of Work.

Take measurements as described in Subsection 109.02 unless otherwise modified by the Measurement Subsection of the section controlling the work being performed. Table 109-1 indicates the accuracy required for quantities of the various pay units used in the Schedule of Items. Use this guide to determine the decimal placement in the final payment.

Table 109-1

Decimal Accuracy of Quantities for Final Payment

Pay Item	Level of Precision
Linear Foot	1
Exception--Timber, Steel, and concrete Piles	0.1
Station	0.1
Mile	0.01
Square Foot	0.1
Square Yard	0.1
Each	1
Acre	0.01
Gallon	1
M-Gals.	0.1
Cubic Yard	1
Exception--Structure Excavation; Sheathing Materials; Bedding, Bed Course, and Backfill Materials; Gabions;	0.1
Exception--Concrete; Masonry	0.01
Pound	1
Ton	0.1
Exception--Calcium Chloride; Sodium Chloride; Hydrated Lime; Bituminous Materials; Pavements; Bed Course Materials	0.01
Hour	0.1
MFBM	0.01
Station Yard	1
Cubic Yard Mile	1
Ton Mile	1

Add the following sentence to Subsection 109.02(b):

109.02 Measurement Terms and Definitions.

(b) Contract quantity.

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

153 - Contractor Quality Control

153.00_Regional_3_8_2023

Delete Section 153 in its entirety and replace with the following.

Section 153. —CONTRACTOR QUALITY CONTROL

Description

153.01 This work consists of planning and implementing a construction quality process to ensure work conforms to the contract. This work also includes quality control inspection and documentation, recording and submitting measurement notes, and process control sampling and testing. See FAR Clause 52.246-12 Inspection of Construction.

Construction Requirements

153.02 Qualifications.

Submit the following for approval with the quality control plan:

(a) Quality control manager (QCM). Name and title of the individual to be responsible for quality control. For timber sales the Purchaser's Representative will be designated as the QCM unless otherwise identified by the Purchaser and agreed to by the Forest Service.

(b) Testers. Provide testers with at least one year experience in the type of sampling and testing required, and with one of the following for the type of sampling and testing performed:

(1) NICET Level II certification in highway material or equivalent state or industry certification;

(2) Certification by a regional certification program (such as Western Alliance for Quality Transportation Construction (WAQTC), Northeast Transportation Technician Certification Program (NETTCP), Southeast Task Force for Technician Training and Qualification (STFTTQ), or Multi Regional Training and Certification (M-TRAC)); or

(3) At least one year employment by an AASHTO accredited laboratory performing equivalent sampling and testing.

153.03 Quality Control Plan (QCP). Develop a QCP addressing all contract work categories. The QCP shall include the following:

(a) Quality control procedures. Description of tests, measurements, or inspections to be performed to ensure work conforms to the contract. Submit written proposals for approval of alternate AASHTO or State approved test methods. Alternate methods may be allowed based on documented equivalence to the specified method.

As a minimum perform process control testing according to the Sampling, Testing, and Acceptance Requirements tables included at the end of each Section where applicable.

(b) Records. Describe the reporting format for all quality control records.

At least 14 days before the start of work, submit the QCP for approval. Do not perform work on a work category unless the quality control for that category is accepted. Approval does not imply that the QCP will result in contract compliance.

Revise the QCP when contract quality requirements are not achieved and when changes occur in the contract, work progress, or personnel.

153.04 Prosecution of Work. Complete the following:

(a) Preparatory phase. When required by a pay item hold a preparatory phase meeting to discuss requirements of the work and the associated quality control process.

(b) Start-up phase.

(1) When required by a pay item hold a start-up meeting to review the planned quality control process.

(c) Production phase.

(1) Inspect, test, and report according to the QCP and evaluate the acceptability of the work produced.

(2) Identify and correct deficiencies.

(3) Request Government inspection and acceptance.

153.05 Sampling and Testing. Inspect commercial laboratory equipment within 45 days of project use.

Have mobile laboratory equipment inspected and calibrated after the laboratory is moved to the project and every time it is moved thereafter. Keep laboratory facilities clean and maintain equipment in proper working condition. Certify that equipment conforms to testing requirements and submit evidence of current calibrations.

Allow the CO unrestricted access to the laboratory for inspection and review. When requested by the CO, provide additional inspections and tests to demonstrate sampling and testing proficiency. Submit proficiency sample test results within 48 hours of sample receipt.

Perform quality control sampling and testing according to the QCP and the sampling, testing, and acceptance requirements table in applicable sections.

When no sampling frequencies are specified, submit the proposed sampling and testing frequencies.

153.06 Certifications. Obtain, review, and verify certifications for work. Submit certifications when required.

153.07 Records and Control Charts. Maintain complete testing and inspection records by road number and pay item number. Make them accessible to the CO.

(a) Quality control and construction operations reports. Prepare weekly, or otherwise agreed to interval, measurement notes showing construction progress by listing quantities of completed work for each pay item per road.

(b) Government Inspection and Acceptance. Requests for Government inspection and acceptance, unless otherwise agreed to, shall include measurement notes listing quantities of completed work by pay item, be signed by the Quality Control Manager, and be certified with the following statement:

"I certify that the information contained in this record is accurate and that work documented herein complies with the contract. Exceptions to this certification are documented as a part of this record."

153.08 Acceptance. The Contractor's quality control system will be evaluated under Subsection 106.02 based on its demonstrated effectiveness to ensure work conforms to the contract.

Measurement and Payment

153.09 Measure contractor quality control according to Subsection 109.02. The accepted quantities will be paid at the contract price per unit of measurement for the Section 153 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

155 - Schedules for Construction Contracts

155.00_National_11_9_2016

Delete Section 155 in its entirety.

Delete Section 155.

156 - Public Traffic

Delete Section 156 in its entirety and replace with the following:

Section 156. – PUBLIC TRAFFIC

Description

156.01 This work consists of controlling and protecting public traffic adjacent to and within the project.

Material

156.02 Conform to the MUTCD and the following Sections and Subsections:

Permanent Traffic Control	633	
Traffic Signing and Marking Material		718
Concrete Barriers and Precast Guardwalls	618	
Temporary plastic fence		710.11

Construction Requirements

156.03 General. Accommodate traffic according to MUTCD, approved traffic control plan and this section. Perform work in a manner that ensures safety and convenience of the public. Unless otherwise provided for in Table 156-1, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Delays may not exceed 4 hours at any one time followed by an open period of no less than **30** minutes. Accommodate public traffic on roads adjacent to and within the project until the project is accepted according to Subsection 106.07(b).

Submit traffic control plan at least 30 days prior to intended use. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved.

Post construction signs and traffic control devices in conformance with MUTCD and Forest Service EM 7100-15. All required signs will be in place and approved prior to beginning work on project.

If the Contractor agrees in writing to allow public traffic to use a new road being constructed prior to completion, it will be considered an existing road for traffic control purposes.

156.04 Temporary Traffic Control. Install and maintain temporary traffic control devices adjacent to and within the project as required by the approved traffic control plan and the MUTCD. Install and maintain traffic control devices as follows:

(a) Furnish and install traffic control devices before the start of construction operations.

(b) All detours outside of clearing limits will be approved in writing by the Contracting Officer as part of the traffic control plan.

(c) Install only those traffic control devices needed for each stage or phase.

(d) Relocate temporary traffic control devices as necessary.

(e) Remove devices that no longer apply to the existing conditions.

(f) Immediately replace any device that is lost, stolen, destroyed, or inoperative.

(g) Keep temporary traffic control devices clean.

(h) Remove all temporary traffic control devices upon contract completion or when approved.

(i) When required, use flaggers certified by the American Traffic Safety Services Association, the National Safety Council, the International Municipal Signal Association, a state agency, or other acceptable organization. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting on flagger paddles. Do not use flags. Flaggers must wear high visibility safety apparel as required by MUTCD 6E.02.

156.05 Temporary Closures. Road segments may be closed as shown in Table 156-1. The maximum consecutive days of closure shall be followed by a minimum number of consecutive days open to traffic as shown. Maintain traffic control devices during closure period(s). Appropriate barricades and signs will be erected and maintained as shown in the traffic control plan or as otherwise designated.

Prior to closing roads during construction, give written notice to the Contracting Officer at least 10 days in advance.

Table 156-1
Temporary Road Closures

Road Number	From Terminus	To Terminus	Maximum Consecutive Days of Closure	Minimum Consecutive Days Open

156.06 Acceptance. Public traffic work will be evaluated under Subsection 106.02.

Measurement and Payment

156.07 Do not measure Public Traffic for payment. Payment for contract work is provided indirectly. See Subsection 109.05.

201 - Clearing and Grubbing

201.03_Regional_8_16_2021

Delete the last sentence in the second paragraph of Subsection 201.03.

201.03 General.

Delete paragraph (c) and (d) of Subsection 201.04 and replace with the following:

201.04 Clearing.

(c) In areas outside the excavation, embankment, and slope rounding limits, cut stumps to within **12** inches or one-third of the stump diameter of the ground, whichever is higher, measured on the side adjacent to the highest ground. For timber sales, stump heights will meet the requirements of the Timber Sale contract; and

(d) Trim tree branches that extend over the road surface and shoulders to attain a clear height of **14 feet.** If required, remove other branches to present a balanced appearance. Trim according to accepted tree surgery practices. Treat wounds with tree wound dressing.

201.04_National_11_2_2016

Add the following paragraph to Subsection 201.04:

201.04 Clearing.

(e) Do not cut vegetation less than 3 feet in height and less than 3 inches in diameter that is within the clearing limits but beyond the roadway and not in a decking area and that does not interfere with sight distance along the road unless otherwise designated.

201.06_National_11_2_2016

Delete the first sentence of this Subsection 201.06 and replace the following:

201.06 Disposal.

Dispose of merchantable timber designated for removal according to the provisions of the timber sale contract.

202 - Additional Clearing and Grubbing

Delete the Subsection 202.01 and replace the following:

202.01 This work consists of clearing and grubbing within clearing limits as designated in the plans. This work also includes scalloping clearing lines, clearing vistas, thinning vegetation, special clearing and grubbing and the removal of individual trees and stumps designated in the plans that may be outside the clearing limits.

Add the following to Subsection 202.04:

202.04 Selective Clearing.

(a) Roadside Clearing. Cut all brush and small trees, 6 inches in diameter or less at the point of cut, inside the roadside clearing limits and outside the roadway no higher than 12 inches above ground level. If rocks or other obstructions are encountered, cut no higher than 6 inches above the obstruction. Limb live trees with a diameter larger than 6 inches to a height of 14 feet above the road surface.

Add the following to Subsection 202.06:

202.06 Special Clearing and Grubbing.

(a) Roadway and Roadside Clearing and Grubbing. Clear Within the roadside clearing limits. Grub the roadway and horizontally 2 feet beyond each shoulder. Dispose of merchantable timber according to Subsection 201.06

203 - Removal of Structures and Obstructions

Add the following to Subsection 203.05:

203.05 Disposing of Material.

(e) Windrowing Construction Slash. Place construction slash outside the roadway in neat, compacted windrows approximately parallel to and along the toe line of embankment slopes. Do not permit the top of the windrows to extend above subgrade. Use construction equipment to matt down all material in a windrow to form a compact and uniform pile. Construct breaks of at least 15 feet at least every 200 feet in a windrow. Do not place windrows against trees.

(f) Scattering. Scatter construction slash in designated areas without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will not roll, and are not on top of one another. Limb and scatter other construction slash to reduce slash concentrations. When scattering for erosion control, place construction slash as flat as practicable on the completed slope.

(g) Chipping. Use an approved chipping machine to chip slash longer than 3 feet. Deposit chips on embankment slopes or outside the roadway to a loose depth less than 6 inches. Minor amounts of chips or ground woody material may be permitted within the roadway if they are thoroughly mixed with soil and do not form a layer.

(h) Debris Mat. Use tree limbs, tops, cull logs, split stumps, wood chunks, and other debris to form a mat upon which construction equipment is operated. Place stumps upside down and blend stumps into the mat.

(i) Decking. Remove brush from designated log deck areas. Limb and top logs.

Logs not meeting the Utilization Standards described in Subsection 201.04(c) shall be cut to lengths less than 8 feet and decked in designated log deck location.

Merchantable timber not associated with an existing timber sale shall be cut to length meeting the Utilization Standards described in Subsection 201.04(c).

Deck logs so that logs are piled parallel to one another; can be removed by standard log loading equipment; will not damage standing trees; will not interfere with drainage, and will not roll. Keep logs in log decks free of brush and soil.

(j) Removal to designated locations. Remove construction slash to designated locations.

(k) Piling. Pile construction slash in designated areas. Place and construct piles so that if the piles are burned, the burning will not damage remaining trees. Keep piles free of dirt from stumps.

204 - Excavation and Embankment

Delete Section 204 in its entirety and replace with the following.

Section 204. — EXCAVATION AND EMBANKMENT

Description

204.01 This work consists of excavating material and constructing embankments. This work also includes furnishing, hauling, stockpiling, placing, disposing, sloping, shaping, compacting, and finishing earthen and rocky material.

204.02 Definitions.

(a) Excavation. Excavation consists of the following:

(1) Roadway excavation. Material excavated from within the right-of-way or easement areas, except subexcavation covered in Subsection 204.02(a)(2) and structure excavation covered in Sections 208 and 209. Roadway excavation includes all material encountered regardless of its nature or characteristics.

(2) Subexcavation. Material excavated from below subgrade elevation in cut sections or from below the original ground-line in embankment sections. Subexcavation excludes the work required by Subsection 204.05 or 204.06.

(3) Borrow excavation. Material used for embankment construction that is obtained from outside the roadway prism. Borrow excavation includes unclassified borrow, and topping.

(b) Embankment construction. Embankment construction consists of placing and compacting roadway or borrow excavation. This work includes:

(1) Preparing foundation for embankment;

(2) Constructing roadway embankments;

(3) Benching for side-hill embankments;

(4) Constructing dikes, ramps, mounds, and berms; and

(5) Backfilling subexcavated areas, holes, pits, and other depressions.

(c) Conserved topsoil. Excavated material conserved from the roadway excavation and embankment foundation areas that is suitable for growth of grass, cover crops, or native vegetation.

(d) Waste. Excess and unsuitable roadway excavation and subexcavation that cannot be used.

Material

204.03 Conform to the following Subsections:

Topping	704.05
Unclassified borrow	704.06
Water	725.01(c)

Construction Requirements

204.04 Preparation for Roadway Excavation and Embankment Construction. Clear the area of vegetation and obstructions according to Sections 201 and 203.

Road pioneering, slash disposal, and grubbing of stumps may proceed concurrently with excavation and embankment. Maintain drainage during pioneering operations.

204.05 Conserved Topsoil. When designated, conserve topsoil from roadway excavation and embankment foundation areas. Stockpile conserved topsoil in low windrows immediately beyond the rounding limits of cut and embankment slopes or in other approved locations. Separate conserved topsoil from other excavated material. When designated, place conserved topsoil on completed slopes according to Section 624.

204.06 Roadway Excavation. Excavate as follows:

(a) Rock cuts. Blast rock according to Section 205. Excavate rock cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Backfill to subgrade with topping or other suitable material. Compact the material according to Subsection 204.11.

(b) Earth cuts. Scarify earth cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Compact the scarified material according to Subsection 204.11.

(c) Pioneer Roads. Conduct excavation and placement operations so material to be treated under Section 201 will not be incorporated into the roadway unless specified in the slash treatment method. Maintain drainage during pioneering operations.

Remove snow and ice in advance of the work and deposit beyond the roadway limits in a manner that will not waste material or generate sediment. Do not incorporate snow and ice into embankments. Place snow or ice in a manner to prevent resource damage.

(d) Drainage Feature. Drainage feature includes construction of all ditches, minor channel changes, drainage dips, catch basins, surface water deflectors, and other minor drainage structures. Compact the material according to Subsection 204.11. Excavate on a uniform grade between control points.

Do not disturb material and vegetation outside the construction limits. Retrieve material deposited outside the construction limits. Dispose of unsuitable or excess excavation material according to Subsection 204.14. Replace shortage of suitable material caused by premature disposal of roadway excavation.

Shape to drain and compact the work area to a uniform cross-section at the end of each day's operations.

204.07 Subexcavation. Excavate material to the required limits. Dispose of unsuitable material according to Subsection 204.14. Take cross-sections according to Section 152. Backfill subexcavated area with suitable material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness and compact according to Subsection 204.11. Prevent unsuitable material from mixing with suitable backfill material.

204.08 Borrow Excavation. Use suitable roadway excavation in embankment construction. Do not use borrow excavation when it results in excess roadway excavation. Deduct excess borrow excavation from the total borrow excavation quantity.

Obtain borrow source approval according to Subsection 105.02. Develop and restore borrow sources according to Subsections 105.03 and 105.06. Do not excavate beyond the established limits. When applicable, shape the borrow source to permit accurate measurements when excavation is complete.

204.09 Preparing Foundation for Embankment Construction. Prepare foundation for embankment construction as follows:

(a) Embankment over natural ground. Remove topsoil and break up the ground surface to a minimum depth of 6 inches (150 millimeters) by plowing or scarifying. Compact the ground surface according to Subsection 204.11.

(b) Embankments over an existing asphalt, concrete, or gravel road surface. Scarify gravel roads to a minimum depth of 6 inches (150 millimeters). Scarify or pulverize asphalt and concrete roads to 6 inches (150 millimeters) below the pavement. Reduce particles to a maximum size of 6 inches (150 millimeters) and produce a uniform material. Compact the surface according to Subsection 204.11.

(c) Embankment across ground not capable of supporting equipment. Dump successive loads of embankment material in a uniformly distributed layer to construct the lower portion of the embankment. Limit the layer thickness to the minimum depth necessary to support the equipment.

(d) Embankment on an existing slope steeper than 1V:3H. Cut horizontal steps in the existing slope to a sufficient width to accommodate placement and compaction operations and equipment. Step the slope as the embankment is placed and compacted in layers. Begin each step at the intersection of the original ground and the vertical cut of the previous step.

204.10 Embankment Construction. Incorporate only suitable roadway excavation material into the embankment. When the supply of suitable roadway excavation is exhausted, furnish unclassified borrow to complete the embankment. Obtain written approval before beginning construction of embankments over 6 feet (2 meters) high at subgrade centerline. Construct embankments as follows:

(a) General. At the end of each day's operations, shape to drain and compact the embankment surface to a uniform cross-section. Eliminate ruts and low spots that could hold water.

During all stages of construction, route and distribute hauling and leveling equipment over the width and length of each layer of material.

Compact embankment side slopes with a tamping foot roller, by walking with a dozer, or by over-building the fill and then removing excess material to the final slope line. For slopes 1V:1¾H or steeper, compact the slopes as embankment construction progresses.

(b) Embankment within the roadway prism. Place embankment material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness. Incorporate oversize boulders or rock fragments into the 12-inch (300-millimeter) layers by reducing them in size or placing them individually as required below. Compact each layer according to Subsection 204.11 before placing the next layer.

Material composed predominately of boulders or rock fragments too large for 12-inch (300-millimeter) layers may be placed in layers up to 24 inches (600 millimeters) thick. Incorporate oversize boulders or rock fragments into the 24-inch (600-millimeter) layer by reducing them in size or placing individual rock fragments and boulders greater than 24 inches (600 millimeters) in diameter as follows:

(1) Reduce rock to less than 48 inches (1200 millimeters) in the largest dimension;

(2) Distribute rock within the embankment to prevent nesting;

(3) Place layers of embankment material around each rock to a depth not greater than that permitted above. Fill voids between rocks; and

(4) Compact each layer according to Subsection 204.11(a) before placing the next layer.

(c) Embankment outside of roadway prism. When placing embankment outside the staked roadway prism, place material in horizontal layers not exceeding 24 inches (600 millimeters) in compacted thickness. Compact each layer according to Subsection 204.11.

204.11 Compaction. Compact the embankment using one of the following methods as specified.

(a) Placement Method 1. Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve. Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

(a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;

(b) Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or

(c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(a), by four passes; or

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(b) and (c), by eight passes.

(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of material passing a No. 4 (4.75-millimeter) sieve, and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet(1 meter) per second. Compact each layer of material full width according to Subsection 204.11(a)(1).

(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C.

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width to at least 95 percent of the maximum density. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures. When required, use AASHTO T 224 to correct for coarse particles.

(b) Placement Method 2. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller "walks out" of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

(1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.

(2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, specifically designed to compact the material on which it is used.

(3) Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi (550 Kilopascals).

(4) Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

(c) Placement Method 3. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

(d) Placement Method 4. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

(e) Placement Method 5. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by ½ width of bucket.

(f) Placement Method 6. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes.

204.12 Drainage Features. Slope, grade, and shape all drainage features. Remove projecting roots, stumps, rock, or similar matter. Maintain all drainage features in an open condition and without sticks, and other debris.

Form furrow ditches by plowing or using other acceptable methods to produce a continuous furrow. Place excavated material on the downhill side so the bottom of the ditch is approximately 18 inches (450 millimeters) below the crest of the loose material. Clean the ditch using a hand shovel or other suitable method. Shape to provide drainage without overflow.

204.13 Sloping, Shaping, and Finishing. Complete subgrade, slopes, drainage features, culverts, riprap, and other underground minor structures before placing aggregate courses. Slope, shape, and finish to the designated tolerance class as defined in Table 204-2 as follows:

(a) Sloping. Leave earth slopes with uniform roughened surfaces, except as described in Subsection 204.13(b), with no noticeable break as viewed from the road. Except in solid rock, round tops and bottoms of slopes including the slopes of drainage ditches. Round material overlaying solid rock to the extent practical. Scale rock slopes. Slope rounding is not required on tolerance class D through M roads.

If a slide or slipout occurs on a cut or embankment slope, remove or replace the material and repair or restore damage to the work. Bench or key the slope to stabilize the slide. Reshape the cut or embankment slope to an acceptable condition.

(b) Stepped slopes. Where required, construct steps on slopes of 1⅓V:1H to 1V:2H. Construct the steps approximately 18 inches (450 millimeters) high. Blend the steps into natural ground at the end of the cut. If the slope contains non-rippable rock outcrops, blend steps into the rock. Remove loose material found in transitional area. Except for removing large rocks that may fall, scaling stepped slopes is not required.

(c) Shaping. Shape the subgrade to a smooth surface and to the cross-section required. Shape slopes to gradually transition into slope adjustments without noticeable breaks. At the ends of cuts and at intersections of cuts and embankments, adjust slopes in the horizontal and vertical planes to blend into each other or into the natural ground.

(d) Finishing. Ensure that the subgrade is visibly moist during shaping and dressing; smooth and uniform, and shaped to conform to the typical sections. Remove material larger than 6 inches (150 millimeters) from the top 6 inches (150 millimeters) of the roadbed. Remove unsuitable material from the roadbed, and replace it with suitable material. Scarify to 6 inches (150 millimeters) below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material.

Maintain proper ditch drainage.

204.14 Disposal of Unsuitable or Excess Material. Dispose of unsuitable or excess material at designated sites or according to Subsection 203.05(a)

When there is a pay item for waste, shape and compact the waste material in its final location. Do not mix clearing or other material not subject to payment with the waste material.

204.15 Acceptance. See Table 204-1 for sampling, testing, and acceptance requirements.

Material for embankment and conserved topsoil will be evaluated under Subsections 106.02 and 106.04.

Excavation and embankment construction will be evaluated under Subsections 106.02 and 106.04.

Subexcavation will be evaluated under Subsections 106.02 and 106.04.

Measurement

204.16 Measure the Section 204 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

(a) Roadway excavation. Measure roadway excavation in its original position as follows:

(1) Include the following volumes in roadway excavation:

(a) Roadway prism excavation;

(b) Rock material excavated and removed from below subgrade in cut sections;

(c) Unsuitable material below subgrade and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;

(d) Ditches, except furrow ditches measured under a separate pay item;

(e) Conserved topsoil;

(f) Borrow material used in the work when a pay item for borrow is not listed in the bid schedule;

(g) Loose scattered rocks removed and placed as required within the roadway;

(h) Conserved material taken from pre-existing stockpiles and used in Section 204 work, except topsoil measured under 624; and

(i) Slide and slipout material not attributable to the Contractor's method of operation.

(2) Do not include the following in roadway excavation:

(a) Overburden and other spoil material from borrow sources;

(b) Overbreakage from the backslope in rock excavation;

(c) Water or other liquid material;

(d) Material used for purposes other than required;

(e) Roadbed material scarified in place and not removed;

(f) Material excavated when stepping cut slopes;

(g) Material excavated when rounding cut slopes;

(h) Preparing foundations for embankment construction;

(i) Material excavated when benching for embankments;

(j) Slide or slipout material attributable to the Contractor's method of operation;

(k) Conserved material taken from stockpiles constructed at the option of the Contractor;

(l) Material excavated outside the established slope limits; and

(m) Road pioneering for the convenience of the Contractor.

(3) When both roadway excavation and embankment construction pay items are listed in the bid schedule, measure roadway excavation only for the following:

(a) Unsuitable material below subgrade in cuts and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;

(b) Slide and slipout material not attributable to the Contractor's method of operations; and

(c) Drainage ditches, channel changes, and diversion ditches.

(b) Unclassified borrow, and topping. When measuring by the cubic yard (cubic meter) measure in its original position. If borrow excavation is measured by the cubic yard (cubic meter) in-place, take initial cross-sections of the ground surface after stripping overburden. Upon completion of excavation and after the borrow source waste material is returned to the source, retake cross-sections before replacing the overburden. Do not measure borrow excavation until suitable roadway excavation is depleted.

(c) Embankment construction. Measure embankment construction in its final position. Do not make deductions from the embankment construction quantity for the volume of minor structures.

(1) Include the following volumes in embankment construction:

(a) Roadway embankments;

(b) Material used to backfill subexcavated areas, holes, pits, and other depressions;

(c) Material used to restore obliterated roadbeds to original contours; and

(d) Material used for dikes, ramps, mounds, and berms.

(2) Do not include the following in embankment construction:

(a) Preparing foundations for embankment construction;

(b) Adjustments for subsidence or settlement of the embankment or of the foundation on which the embankment is placed; and

(c) Material used to round fill slopes.

(d) Rounding cut slopes. If a pay item for slope rounding is included in the bid schedule measure rounding cut slopes horizontally along the centerline of the roadway. If a pay item is not included for slope rounding is not included in the bid schedule payment will be considered indirect to roadway excavation.

(e) Waste. Measure waste by the cubic yard (cubic meter) in its final position. Take initial cross-sections of the ground surface after stripping over-burden. Upon completion of the waste placement, retake cross-sections before replacing overburden.

(f) Slope scaling. Measure slope scaling by the cubic yard (cubic meter) in the hauling vehicle.

(g) Subexcavation. Measure subexcavation by the cubic yard (cubic meter) in its original position.

(h) Drainage features. Measurement includes all excavation, embankment, shaping, and grading necessary for a completed drainage feature.

Payment

204.17 The accepted quantities will be paid at the contract price per unit of measurement for the Section 204 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Table 204-1
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Source								
Topping (704.05)	Measured and tested for conformance (106.04 & 105)	Classification[1]	–	AASHTO M 145	1 per soil type and source of material	Processed material	Yes	Before using in work
Unclassified borrow (704.06)	"	"	–	"	"	"	"	"
Production								
Topping (704.05) and (204.11(a))	Measured and tested for conformance (106.04)	Moisture-density	–	T 99, Method C[2]	1 per soil type, but not less than 1 per each 13,000 yd^3 (10,000 m^3)	Processed material	Yes	Before using in work
		Density	–	AASHTO T 310 or other approved procedures	1 per 3500 yd^2 (3000 m^2), but not less than 3 per layer	In-place	No	Before placement of next layer
Unclassified borrow (704.06) and (204.11(a))	"	Moisture-density	–	T 99, Method C[2]	1 per soil type, but not less than 1 per each 13,000 yd^3 (10,000 m^3)	Processed material	Yes	Before using in work
		Density	–	AASHTO T 310 or other approved procedures	1 per 3500 yd^2 (3000 m^2), but not less than 3 per layer	In-place	No	Before placement of next layer
Production (continued)								

Table 204-1
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Earth embankment (204.11(a))	Measured and tested for conformance (106.04)	Classification	–	AASHTO M 145	1 per soil type	Source of material	Yes	Before using in work
		Moisture-density	–	T 99, Method C(2)	1 per soil type, but not less than 1 per each 13,000 yd^3 (10,000 m^3)	"	"	"
		Density	–	AASHTO T 310 or other approved procedures	1 per 3500 yd^2 (3000 m^2), but not less than 3 per layer	In-place	No	Before placement of next layer
Top of subgrade (204.11(a))	"	Density	–	AASHTO T 310 or other approved procedures	1 per 2500 yd^2 (2000 m^2), but not less than 3 per layer	In-place	No	Before placement of next layer
Finished Product								
Roadbed (204.13)	Measured and tested for conformance (106.04)	Final line & grade	–	Field measured	Determined by the CO	Determined by the CO	No	Before placement of next layer

(1) Not required when using Government-provided source.
(2) Minimum 5 points per proctor.

Table 204-2
Construction Tolerances

Location Description	Tolerance Class (a)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Roadbed width (ft)	+0.5	+0.5	+1.0	+1.0	+1.0	+1.0	+1.5	+1.0	+2.0	+2.0	+2.0	+2.0	+2.0
Subgrade elevation (ft)	±0.1	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±2.0	±3.0	±2.0	±3.0	(c)
Centerline alignment (ft)	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±1.5	±2.0	±3.0	±3.0	±5.0	(c)
Slopes, excavation, and embankment (% slope[b])	±3	±5	±5	±5	±5	±5	±10	±10	±10	±10	±20	±20	±20

(a) Maximum allowable deviation from construction stakes and drawings.
(b) Maximum allowable deviation from staked slope measured from slope stakes or hinge points.
(c) Unless otherwise shown the centerline alignment and subgrade elevation, as built, have no horizontal curves with a radius of less than 80 feet, and no vertical curves with a curve length of less than 80 feet when the algebraic difference in the grade change is less than 10 percent, or a curve length of less than 100 feet when the algebraic difference of the grade change is greater than or equal to 10 percent. The centerline grade is not to exceed 20 percent in 100 feet of length.

209 - Structure Excavation and Backfill

209.01_Regional_11_17_2022

209.01 This work consists of excavating material for the construction of structures, except those specifically designated under Section 208. This work also includes preserving channels, shoring and bracing, sealing foundations, dewatering, preparing foundations, bedding, and backfilling.

Material

209.02 Conform to the following Sections and Subsections:

Backfill material	704.03
Bedding material	704.02
Foundation fill	704.01
Lean concrete backfill	614
Structural concrete, Class S (Seal)	552
Unclassified borrow	704.06

Construction Requirements

209.03 General. Clear the area of vegetation and obstructions according to Sections 201 and 203.

Excavate trenches or foundation pits according to Subsection 208.03. Excavate to foundation grade without disturbing the trench or foundation surface. Foundation grade is the elevation at the bottom of the bedding for installing the structure.

209.04 Channel Preservation. Preserve channels according to Subsection 208.04, except excavate inside separations such as dikes or sandbags.

209.05 Foundation Seal. When foundation seals are necessary, construct a foundation seal according to Subsection 208.06.

209.06 Dewatering. When dewatering is necessary, dewater according to Subsection 208.07.

209.07 Foundation Preparation. Excavate unsuitable material when encountered at foundation grade as directed by the CO.

Where a footing is required to be keyed into undisturbed material, prepare foundation and construct footing according to Subsection 208.08(c).

Backfill and compact with foundation fill according to Subsection 208.08(d).

209.08 Bedding. Place bedding as follows:

(a) For box culverts and structures other than pipe culverts. Construct bedding when specified. Place and grade bedding material in compacted layers not exceeding 6 inches (150 millimeters) in depth. Compact each layer according to Subsection 209.10.

(b) For pipe culverts. Level the foundation. Place uncompacted bedding material over the foundation in a layer of uniform thickness. Lay a 4-inch (100-millimeter) thickness of bedding for pipes with diameters of 12 to 54 inches (300 to 1350 millimeters). Lay a 6-inch (150-millimeter) thickness of bedding for pipe with diameters larger than 54 inches (1350 millimeters). Recess the bedding to receive the joints for pipes with belled joints. Place the culvert on the uncompacted bedding layer and backfill according to Subsection 209.09(b).

(c) For pipe culverts less than 96 inches in diameter. Unless otherwise shown on the plans provide material for bedding consisting of selected 3 inch minus mineral soil that is readily compactible and free of frozen lumps, chunks of highly plastic clay (with a PI greater than 10), or other objectionable material. Bed the pipe according to subsection 209.08(b). Material for bedding shall be evaluated according to Subsection 106.02.

209.09 Backfill. Backfill as follows:

(a) **General.** Place backfill layers evenly on all sides of the structure. Extend each layer to the limits of the excavation or natural ground.

Place backfill material in compacted layers not exceeding 6 inches (150 millimeters) in depth.

Do not place backfill material against concrete until 80 percent of the design strength is achieved.

Compact each layer according to Subsection 209.10.

Backfill without damaging or displacing the culvert or structural plate structure. Replace any pipe that is distorted by more than 5 percent of nominal dimensions, or that is ruptured or broken.

(b) Pipe culverts. Backfill according to one of the following:

(1) Pipe culverts. Place and compact backfill material in evenly balanced layers on each side of the pipe to a height of 24" inches (300 millimeters) above the top of the pipe culvert. Complete backfilling to the top of the trench. Place and compact backfill material in the trench in layers not exceeding 6 inches (150 millimeters) in depth according to Subsection 209.10.

(2) Pipe culverts with lean concrete backfill. Place and anchor pipe to prevent floating and movement. Backfill using lean concrete according to Section 614.

(3) Pipe culverts less than 96 inches in diameter. Unless otherwise shown on the plans provide material for backfill consisting of selected 3 inch minus mineral soil that is readily compactible and free of frozen lumps, chunks of highly plastic clay (with a PI greater than 10), or other objectionable material. Backfill according to subsection 209.09(b)(1). Material for backfill shall be evaluated according to Subsection 106.02.

Do not place or backfill pipe that meets any of the following conditions until the excavation and foundation have been approved in writing by the CO:

- Embankment height greater than 10 feet at subgrade centerline.
- Installation in a protected stream course.

- Round pipe with a diameter of 48 inches or greater.
- Pipe arches with a span of 50 inches or greater.
- Any box culvert or structure other than pipe culverts.

(c) Structural plate structures. Place and compact backfill material to a height of 12 inches (300 millimeters) above the top of the structural plate structure. When applicable, complete backfilling and compacting according to Subsection 204.10.

(d) Repair existing pavement areas. See Subsection 418.04.

209.10 Compacting. Compact the embankment using one of the following methods as specified.

(a) Compaction Method 1. Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve. Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

(a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;

(b) Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or

(c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(a), by four passes; or

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(b) and (c), by eight passes.

(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of material passing a No. 4 (4.75-millimeter) sieve, and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet(1 meter) per second. Compact each layer of material full width according to Subsection 209.10(a)(1).

(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C..

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width to at least 95 percent of the maximum density. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures. When required, use AASHTO T 224 to correct for coarse particles.

(b) Compaction Method 2. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller "walks out" of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

(1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.

(2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, specifically designed to compact the material on which it is used.

(3) Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi (550 Kilopascals).

(4) Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

(c) Compaction Method 3. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

(d) Compaction Method 4. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

(e) Compaction Method 5. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by ½ width of bucket.

(f) Compaction Method 6. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes

209.11 Acceptance. See Table 209-1 for sampling, testing, and acceptance requirements.

Material for backfill, bedding, and foundation fill will be evaluated under Subsections 106.02 and 106.04, except lean concrete for bedding or backfill will be evaluated according to Section 614.

Structural excavation and backfill work will be evaluated under Subsections 106.02 and 106.04.

Shoring and bracing will be evaluated under Subsections 106.02 and 106.04.

Clearing and removal of obstructions will be evaluated under Sections 201 and 203.

Seal concrete will be evaluated under Section 552.

Measurement and Payment

209.12 Do not measure structure excavation and backfill for payment. See Subsection 109.05.

Measure foundation fill under Section 208.

Do not measure excavation and concrete for cofferdam seals for payment.

Table 209-1
Sampling, Testing, and Acceptance Requirement

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Source								
Backfill material[(1)] (704.03)	Measured and tested for conformance (106.04 & 105)	Classification	–	AASHTO M 145	1 per soil type	Source of material	Yes	Before using in work
		Gradation	–	AASHTO T 27 & T 11	"	"	"	"
Bedding material[(1)] (704.02)	"	"	–	"	"	"	"	"
Foundation fill[(1)] (704.01)	"	Classification	–	AASHTO M 145	"	"	"	"
		Gradation	–	AASHTO T 27 & T 11	"	"	"	"
Unclassified borrow[(1)] (704.06)	"	Classification	–	AASHTO M 145	"	"	"	"

Table 209-1 (continued)
Sampling, Testing, and Acceptance Requirements

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Production								
Backfill material (704.03)	Measured and tested for conformance (106.04)	Moisture-density	–	AASHTOT 99, Method C(2)	1 per soil type	Source of material	Yes	Before usingin work
		Density	–	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer
Bedding material (704.02)	"	Moisture-density	–	AASHTOT 99, Method C(2)	1 per soil type	Source of material	Yes	Before usingin work
		Density	–	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer
Foundation fill (704.01)	"	Moisture-density	–	AASHTO T 99, Method C(2)	1 per soil type	Source of material	Yes	Before usingin work
		Density	–	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer
Unclassified borrow (704.06)	"	Moisture-density	–	AASHTOT 99, Method C(2)	1 per soil type	Source of material	Yes	Before usingin work
		Density	–	AASHTO T 310 or other approved procedures	2 per lift	In-place	No	Before placing next layer

(1) Not required when using Government-provided source.
(2) Minimum of 5 points per proctor.

Make the following Changes to Subsection 209.09:

209.09 Backfill.

Add the following to Subsection 209.09(a):

(a) General.

Backfill without damaging or displacing the culvert or structural plate structure. Replace any pipe that is distorted by more than 5 percent of nominal dimensions, or that is ruptured or broken.

Add the following to Subsection 209.09(b)

(b) Pipe culverts.

Do not place or backfill pipe that meets any of the following conditions until the excavation and foundation have been approved in writing by the CO:

- Embankment height greater than 6 feet at subgrade centerline.
- Installation in a protected stream course.
- Round pipe with a diameter of 48 inches or greater.
- Pipe arches with a span of 50 inches or greater.
- Any box culvert or structure other than pipe culverts.

Delete Subsection 209.10 and replace with the following:

209.10 Compacting.

Compact the embankment using one of the following methods as specified.

(a) Compaction Method 1. Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve. Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

(a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;

(b) Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or

(c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(a), by four passes; or
- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(b) and (c), by eight passes.

(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of material passing a No. 4 (4.75-millimeter) sieve, and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet(1 meter) per second. Compact each layer of material full width according to Subsection 209.10(a)(1).

(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C..

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width to at least 95 percent of the maximum density. Determine the in-place density and moisture

content according to AASHTO T 310 or other approved test procedures. When required, use AASHTO T 224 to correct for coarse particles.

(b) Compaction Method 2. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller "walks out" of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

(1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.

(2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, specifically designed to compact the material on which it is used.

(3) Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi (550 Kilopascals).

(4) Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

(c) Compaction Method 3. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

(d) Compaction Method 4. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

(e) Compaction Method 5. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by ½ width of bucket.

(f) Compaction Method 6. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes.

212 - Linear Grading

212.03_Regional_5_31_2018

Delete the first and second paragraph of Subsection 212.03 and replace with the following:

212.03 Roadway Excavation and Embankment.
Construct the roadbeds according to the requirements of Section 204, except as modified herein.

Adjust the moisture content of embankment material to a moisture content suitable for compaction. Place embankment material in 12-inch layers and compact each layer according to Subsection 204.11. Where compacting with rollers is not practical, use approved mechanical or vibratory compaction equipment.

Delete Subsection 212.04(a) and replace with:

212.04 Grading Tolerance.

(a) Alignment (centerline). Alignment may be shifted a maximum of 10 feet (3 meters) left or right of the planned centerline. Curve radii may be reduced by up to 50 percent. Do not construct curves with radii less than 50 feet. Compound curves are permitted

301 - Untreated Aggregate Courses

Add the following to Subsection 301.03:

301.03 General.

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size, no gradation will be required otherwise. After processing on the road, remove all oversize material from the road and dispose as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

Develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpile according to Section 314.

303 - Road Reconditioning

303.05_Regional_5_31_2018

Delete Subsection 303.05 and replace with the following:

303.05 Roadbed Reconditioning.

Remove organic, deleterious, and material larger than 6 inches brought to the surface during reconditioning. Scarify potholes, ruts, and areas shown in the plans to a 6-inch depth or the bottom of the pothole, whichever is less. Dispose of waste at designated sites or according to Subsection 204.14. Repair soft and unstable areas according to Subsection 204.07. Remove irregularities and shape to a uniform surface. Perform the work, including mixing or spreading, when the moisture content is suitable for the specified compaction method. Compact the surface according to Subsection 204.11. Shape the surface according to 204.13(c).

Delete Subsection 303.06 and replace with the following:

303.06 Aggregate Surface Reconditioning.

Repair soft and unstable areas to the full aggregate surface depth and according to Subsection 204.07. Scarify potholes, ruts, and areas shown in the plans to a 6-inch depth or the bottom of the pothole, whichever is less. Remove irregularities and shape to a uniform surface. Perform the work, including mixing or spreading, when the moisture content is suitable for the specified compaction method. Compact the surface according to Subsection 204.11. Shape the surface according to 204.13(c).

303.07_National_7_18_2017

Add the following to Subsection 303.07:

303.07 Roadway Reconditioning.

Remove cattleguard decks. Clean the deck and the area beneath the cattleguard of soil and other material to the bottom of the original foundation over the entire width of the installation. Dispose of waste at designated sites or according to Subsection 204.14. Reinstall the cattleguard deck.

602 - Culverts and Drains

602.05_National_7_7_2017

Add the following to Subsection 602.05.

602.05 Laying Metal Pipe.

(c) Standard Connecting bands. Band corrugation shall match that of the pipe sections being joined or the annular rerolled ends of those pipe sections.

622 - Rental Equipment

622.01_Regional_5_1_2018

Add the following to Subsection 622.01

622.01 Description

Work is to correct minor site discrepancies not noted in the contract documents that occurred between award of contract and implementation of work needed to result in a complete project. Examples of work may include:

a. Excavating and placing embankment,
b. Slide removal,
c. Drainage and roadway repair,
d. Haul and placement of material such as rocks, logs, or debris, or
e. Sign or gate installation

633 - Permanent Traffic Control

Delete the first sentence of Subsection 633.02 and replace with the following:

633.02 Material.

Conform to the MUTCD, USDA Forest Service EM-7100-15, and the following Section and Subsections:

Make the following changes to Subsection 633.03:

633.03 General.

Delete the first paragraph of Subsection 633.03 and replace with the following:

Furnish and install permanent traffic control devices according to the MUTCD, USDA Forest Service EM-7100-15 and permanent traffic control plans. Provide traffic control devices that are crashworthy.

Add the following sentence to Subsection 633.03:

Sign panel layout proofs shall be approved by the CO prior to ordering.

Add the following to Subsection 633.05(a):

633.05 (a) Fabrication.

(3) Protective Overlay Film. When specified, cover the entire face of a sign with a clear high-performance, solvent-resistant, ultraviolet-stabilized, pressure-sensitive adhesive, protective overlay film. Use 3M Scotchlite Premium Protective Overlay Film Series 1160 or approved equivalent.

(4) Edge Film. When specified, edge film shall be 3 inches wide vinyl film that is pressure-sensitive, premium quality, clear, and ultraviolet-resistant.

703 - Aggregate

Delete 703.05 and replace with the following:

703.05 Subbase, Base, Surface Course, and Screened Aggregate.

(a) Subbase or base aggregate. Furnish hard, durable particles or fragments of crushed stone, crushed slag, or crushed gravel conforming the following:

(1) Gradation	Table 703-2
(2) Liquid limit, AASHTO T 89	25 max.
(3) Plastic limit, AASHTO T 90	Nonplastic
(4) Los Angeles abrasion, AASHTO T 96	40% max.
(5) Sodium sulfate soundness loss (5 cycles), AASHTO T 104	12% max.
(6) Durability index (coarse), AASHTO T 210	35 min.
(7) Durability index (fine), AASHTO T 210	35 min.
(8) Fractured faces, ASTM D 5821	50% min.
(9) Free from organic matter and lumps or balls of clay	

Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary. Fine aggregate, material passing the No. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.

(b) Surface course aggregate. Furnish hard, durable particles or fragments of crushed stone, crushed slag, or crushed gravel conforming the following:

(1) Gradation	Table 703-3
(2) Liquid limit, AASHTO T 89	35 max.
(3) Plastic Index, AASHTO T 90	
a) If the percent passing the No. 200 sieve is less than 12%	2 to 9
b) If the percent passing the No. 200 sieve is greater than 12%	Less than 2
(4) Los Angeles abrasion, AASHTO T 96	40% max.
(5) Sodium sulfate soundness loss (5 cycles), AASHTO T 104	12% max.
(6) Durability index (coarse), AASHTO T 210	35 min.
(7) Durability index (fine), AASHTO T 210	35 min.
(8) Fractured faces, ASTM D 5821	75% min.
(9) Free from organic matter and lumps or balls of clay	

Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Do not furnish material that contains asbestos fibers.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary. Fine aggregate, material passing the No. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.

(c) Screened aggregate – Furnish hard, durable particles or fragments of stone, slag, or gravel conforming the following:

(1) Gradation	Table 703-13
(2) Plastic Index, AASHTO T 90	Less than 9
(3) Los Angeles abrasion, AASHTO T 96	55% max.
(4) Free from organic matter and lumps or balls of clay.	

Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary.

Delete Table 703-2 and replace with the following:

Table 703-2
Target Value Ranges for Subbase and Base Gradation

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)				
	Grading Designation				
	A (Subbase)	B (Subbase)	C (Base)	D (Base)	E (Base)
2½ inch	100				
2 inch	97 – 100	100	100		
1½ inch		97 – 100			
1 inch	65 – 79 (6)		80 – 100 (6)	100	
3/4 inch			64 – 94 (6)	86 – 100 (6)	100
1/2 inch	45 – 59 (7)				
3/8 inch			40 – 69 (6)	51 – 82 (6)	62 – 90 (6)
No. 4	28 – 42 (6)	40 – 60 (8)	31 – 54 (6)	36 – 64 (6)	36 – 74 (6)
No. 40	9 – 17 (4)			12 – 26 (4)	12 – 26 (4)
No. 200	4.0 – 8.0 (3)	4.0 – 12.0 (4)	4.0 –7.0 (3)	4.0 – 7.0 (3)	4.0 – 7.0 (3)

( ) The value in the parentheses is the allowable deviation (±) from the target values..

Delete Table 703-3 and replace with the following:

Table 703-3
Target Value Ranges for Surface Gradation

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)					
	Grading Designation					
	F	G	H	S	T	U
1 1/2 inch	100			100		
1 inch	97-100	100		72 – 92 (6)	100	
3/4 inch	76-89 (6)	97 - 100	97 - 100			100
1/2 inch					71 – 91 (6)	
3/8 inch	56-68 (6)	70 – 80 (6)	80 – 92 (6)	51 – 71 (6)		71 – 90 (6)
No. 4	43-53 (7)	51 – 63 (7)	58 – 70 (7)	36 – 53 (7)	43 – 60 (7)	50 – 68 (7)
No. 8				26 – 40 (6)	30 – 46 (6)	34 – 51 (6)
No. 16	23-32 (6)	28 – 39 (6)	28 – 40 (6)			
No. 40	15-23 (5)	19 – 27 (5)	16 – 26 (5)	14 – 25 (5)	16 – 28 (5)	19 – 30 (5)
No. 200	10.0-16.0 (4)	10.0 – 16.0 (4)	9.0 – 14.0 (4)	8.0 – 15.0 (4)	8.0 – 15.0 (4)	8.0 – 15.0 (4)

( ) The value in the parentheses is the allowable deviation (±) from the target values.
If the plasticity index (PI) is greater than 0, the TV range for the No. 200 sieve size is 8-12 (4).

Add Table 703-14:

Table 703-14
Gradation Requirements for Gradation W

Sieve Size	Percent by Mass Passing Designed Sieve (AASHTO T 27 & AASHTO T 11)
3 inch (75 mm)	100
2 1/2 inch (63 mm)	70 - 100
2 inch (50 mm)	35 - 50
1 inch (25 mm)	0.0 - 5.0

705 - Rock

705.02_National_7_18_2017

Add the following Class to Table 705-1 in Subsection 705.02:

705.02 Riprap. Table 705-1.

Table 705-1
Gradation Requirements for Riprap(1)

Class	% of Rock Equal or Smaller by Count, DX	Range of Intermediate Dimensions,(2) inches (millimeters)	Range of Rock Mass,(3) pounds (kilograms)
0	100	6 – 8 (150 –200)	17 – 41 (8 – 19)
	85	5 – 6 (150 – 150)	10 – 17 (5 – 8)
	50	2 – 5 (50 – 125)	0.6 – 10 (0.3 – 5)
	15	0 – 2 (0 – 50)	0 – 0.6 (0 – 0.3)

ONLY SHADED CELLS REQUIRE FILL-IN. DO NOT DELETE COLUMNS OR TABS, INSTEAD RIGHT CLICK AND HIDE UNWANTED COLUMNS OR TABS

CLEAR CORRAL STWD - IRTC		ROAD NO.	650	650F	650G	1106	1106E	1106F	1106F1	1106H	1106I	1160	1160D	9441	9441A	9441A1	9441A2	9442
		MILES	1.80	0.55	1.09	4.98	0.61	0.61	0.74	1.14	0.28	1.69	1.55	0.46	1.16	0.26	0.32	1.44
		RECON/CON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON	RECON
ITEM NO	DESCRIPTION	UNITS	SUMMARY OF QUANTITIES															
15101	MOBILIZATION	LUMP SUM	0.02	0.01	0.05	0.08	0.08	0.06	0.03	0.07	0.02	0.30	0.08	0.01	0.06	0.06	0.01	0.06
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE												0.37	1.16		0.26	
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE		0.55	1.09		0.61		0.74		0.28			0.09		0.26	0.06	
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE						0.61		1.14		1.69	1.55					1.44
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH				1			1			1			3			
20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	CUBIC YARD				225				10								
20420A	DRAINAGE EXCAVATION, TYPE ROADSIDE DITCH, TOLERANCE CLASS A, COMPACTION METHOD 5	FOOT					200											
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	EACH								6					1			
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE			0.08	0.02	0.61					0.59	0.12				0.06	
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20		110	5				30								
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20		70	40	60	300	70	70	140	1782	30		60	50		200
30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	CUBIC YARD											10			10		
30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	CUBIC YARD											60			80		
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.80	0.55	1.01	4.96		0.61	0.74	1.14	0.28	1.10	1.43	0.46	1.16	0.26	0.26	1.44
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT				60	84			40		40			120			
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT					40		42	40						90		
60201C	36 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT											40					
60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	FOOT											40			50		
63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	EACH										1		1				
63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	EACH										1		1				

WORKLIST						
Road # 650						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
						JCT. W/ ROAD #1106
15.42	13.62	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	1.80	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
						EXISTING 18" CMP
15.32						EXISTING 18" CMP W/ DROP INLET
15.28						EXISTING 18" CMP
15.21						EXISTING 18" CMP
15.16						EXISTING 18" CMP
15.13						JCT. W/ ROAD #1106M - RIGHT
15.08						EXISTING 18" CMP W/ DROP INLET
15.02						EXISTING 18" CMP W/ DROP INLET
14.98						EXISTING 18" CMP
14.92						EXISTING 36" CMP - LIVE WATER
14.85						EXISTING 18" CMP
14.82						EXISTING 18" CMP W/ DROP INLET
14.81						JCT. W/ ROAD 650F - RIGHT
14.77						EXISTING 18" CMP W/ DROP INLET
14.73						EXISTING 18" CMP
14.67						EXISTING 18" CMP
14.56						EXISTING 18" CMP
14.51						EXISTING 18" CMP W/ DROP INLET
14.47		30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 6" ABC X 14' WIDTH X 70' LENGTH
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 100' LENGTH
14.42						EXISTING 24" CMP - LIVE WATER
14.37						EXISTING 18" CMP
14.29						EXISTING 18" CMP

WORKLIST						
Road # 650						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
14.26						EXISTING 18" CMP
14.20						EXISTING 18" CMP
14.15						EXISTING 18" CMP W/ DROP INLET
14.11						EXISTING 18" CMP W/ DROP INLET
14.05						EXISTING 18" CMP W/ DROP INLET
14.00						EXISTING 18" CMP
13.96						EXISTING 18" CMP W/ DROP INLET
13.92						EXISTING 18" CMP
						JCT. W/ ROAD 650-E - LEFT
13.86						EXISTING 18" CMP
13.82						EXISTING 18" CMP
13.77						EXISTING 18" CMP
13.69						EXISTING 18" CMP
13.62	13.62					JCT. W/ ROAD 650-G - RIGHT
						EXISTING 18" CMP W/ DROP INLET
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: WEST FORK CLEAR CREEK

Road No. _650_

Length (Miles) 1.80

ROAD TOTAL: $ 7,522.80

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.02	$ 23,850.00	$ 477.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20	$ 38.40	$ 768.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20	$ 38.40	$ 768.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.80	$ 3,061.00	$ 5,509.80

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _650_

Road Name: WEST FORK CLEAR CREEK **Length (Miles)** 1.80

ROAD TOTAL: $ 7,522.80

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.02	$ 23,850.00	$ 477.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20	$ 38.40	$ 768.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20	$ 38.40	$ 768.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.80	$ 3,061.00	$ 5,509.80

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 650F						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 650
	0.55	20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	0.55	MILE	8" DBH TREES IN ROADWAY
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.55	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.55	0.55					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: NESTING FALCON

Road No. _650F_

Length (Miles) 0.55

ROAD TOTAL: $ 3,860.80

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.01	$ 23,850.00	$ 238.50
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.55	$ 3,525.00	$ 1,938.75
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.55	$ 3,061.00	$ 1,683.55

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _650F_

Road Name: NESTING FALCON **Length (Miles)** 0.55

ROAD TOTAL: $ 3,860.80

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.01	$ 23,850.00	$ 238.50
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.55	$ 3,525.00	$ 1,938.75
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.55	$ 3,061.00	$ 1,683.55

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 650G						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 650
	1.09	20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	1.09	MILE	12" DBH TREES IN ROADWAY
	0.54	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.54	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.54						END PAY ITEM 30315 ROADWAY RECONDITIONING
0.54	0.62	21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	0.08	MILE	BEGIN ROAD REALIGNMENT FOR CORNER - FOLLOW FLAG LINE
		30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	110	CUBIC YARD	PLACE 6" ABC X 14' WIDTH X 400' LENGTH
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	70	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 400' LENGTH
0.62	0.62					END OF ROAD REALIGNMENT - END PAY ITEM 21201 LINEAR GRADING
0.62	1.09	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.47	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
1.09	1.09					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: SOARING FALCON

Road No. _650G_

Length (Miles) 1.09

ROAD TOTAL: $ 16,638.36

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.05	$ 23,850.00	$ 1,192.50
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	1.09	$ 3,525.00	$ 3,842.25
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.08	$ 20,000.00	$ 1,600.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	110	$ 38.40	$ 4,224.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	70	$ 38.40	$ 2,688.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.01	$ 3,061.00	$ 3,091.61

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _650G_

Road Name: SOARING FALCON **Length (Miles)** 1.09

ROAD TOTAL: $ 16,638.36

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.05	$ 23,850.00	$ 1,192.50
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	1.09	$ 3,525.00	$ 3,842.25
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.08	$ 20,000.00	$ 1,600.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	110	$ 38.40	$ 4,224.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	70	$ 38.40	$ 2,688.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.01	$ 3,061.00	$ 3,091.61

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1106						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
9.80	13.00	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	3.20	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
9.83						EXISTING 18" CMP
9.93						EXISTING 18" CMP / MP 10 SIGN
10.00						EXISTING 18" CMP
10.07		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 4" ASC +/- 25' X ROAD WIDTH
						EXISTING 18" CMP
10.09						JCT. W/ ROAD 9441 (RIGHT)
10.17						EXISTING 18" CMP
10.22		20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	1	EACH	REMOVE EXISTING CMP
		20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	220	CUBIC YARD	ADDITIONAL EXCAVATION DUE TO DEEP FILL CULVERT REPLACEMENT
		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	60	FOOT	INSTALL NEW 18" CMP AS STAKED.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
10.28						EXISTING 18" CMP
10.32						JCT. W/ ROAD 1160 (LEFT)
10.34						EXISTING 18" CMP
10.40						EXISTING 18" CMP
10.44						EXISTING 18" CMP
10.52						EXISTING 24" CMP
10.55						EXISTING 24" CMP
10.65						EXISTING 18" CMP
10.68						JCT. W/ ROAD 1106G (LEFT)
10.69						EXISTING 48" CMP
10.83						EXISTING 18" CMP
10.88						JCT. W/ ROAD 1106E (RIGHT)
10.90						EXISTING 18" CMP
10.94						EXISTING 18" CMP
11.00						EXISTING 18" CMP
11.12						EXISTING 18" CMP
11.20						EXISTING 18" CMP
11.25						EXISTING 18" CMP

WORKLIST						
Road # 1106						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
11.32						EXISTING 18" CMP
11.39						EXISTING 24" CMP
11.45						EXISTING 24" CMP
11.48						EXISTING 18" CMP
11.55						EXISTING 18" CMP
11.61						EXISTING 18" CMP
11.65						EXISTING 18" CMP
11.68						EXISTING 18" CMP
11.72						EXISTING 18" CMP
11.79						EXISTING 18" CMP
11.85						EXISTING 18" CMP
11.91						JCT. W/ ROAD 1106H (LEFT)
11.95						EXISTING 18" CMP
11.98						JCT. W/ ROAD 1106F (RIGHT)
11.99						EXISTING 18" CMP
12.04						EXISTING 18" CMP
12.11						EXISTING 18" CMP
12.17						EXISTING 24" CMP
12.31						EXISTING 18" CMP
12.34						EXISTING 18" CMP
12.40						EXISTING 18" CMP
12.45						EXISTING 24" CMP
12.55						EXISTING 18" CMP
12.59						EXISTING 18" CMP
12.61						EXISTING 18" CMP
12.66						EXISTING 18" CMP
12.69						EXISTING 24" CMP
12.79						EXISTING 18" CMP
12.86						EXISTING 18" CMP
12.89						EXISTING 18" CMP
12.95						EXISTING 18" CMP

WORKLIST						
Road # 1106						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
13.00	13.00					END PAY ITEM 30315 ROADWAY RECONDITIONING
	13.01	21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	0.01	MILE	BEGIN PAY ITEM 21201 LINEAR GRADING (RECONSTRUCT NARROW SEGMENT TO 14' TRAVELWAY)
13.01	13.01					END PAY ITEM 21201 LINEAR GRADING
	14.65	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	1.64	MILE	BEGIN PAY ITEM 30315 ROADWAY RECONDITIONING
13.05						EXISTING 18" CMP
13.12		20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	5	CUBIC YARD	EXCAVATE 2' X 2.5' X 8' SINK HOLE IN ROAD (SIDE CAST UNSUITABLE MATERIALS)
		30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	5	CUBIC YARD	USE AGGREGATE BASE COURSE TO REPLACE UNSUITABLE MATERIAL UNEARTHED DURING EXCAVATION TO REPAIR SUBGRADE.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 4" ASC +/- 25' X ROAD WIDTH
13.13						EXISTING 48" CMP
13.16						EXISTING 18" CMP
13.25						EXISTING 18" CMP
13.30						EXISTING 24" CMP
13.36						EXISTING 24" CMP
13.43						EXISTING 24" CMP
13.50						EXISTING 18" CMP
13.54						EXISTING 18" CMP
13.66						EXISTING 18" CMP
13.72						EXISTING 24" CMP
13.83						EXISTING 18" CMP
13.89						EXISTING 18" CMP
14.01						EXISTING 18" CMP
14.07						EXISTING 18" CMP
14.11						EXISTING 18" CMP
14.20						EXISTING 18" CMP
14.25						EXISTING 18" CMP
14.28						EXISTING 18" CMP
14.31						JCT. W/ ROAD 650D (LEFT)
14.34						EXISTING 18" CMP
14.40						EXISTING 18" CMP
14.42						JCT. W/ ROAD 1106I (LEFT)
14.47						EXISTING 18" CMP W/ DROP INLET

WORKLIST						
Road # 1106						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
14.50						EXISTING 18" CMP
14.51						JCT. W/ ROAD 1106A (RIGHT)
14.56						EXISTING 18" CMP W/ DROP INLET
14.60						EXISTING 18" CMP
14.63						EXISTING 18" CMP
14.64						EXISTING MP 15 SIGN
14.65	14.65					END PAY ITEM 30315 ROADWAY RECONDITIONING
	14.66	21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	0.01	MILE	BEGIN PAY ITEM 21201 LINEAR GRADING (RECONSTRUCT NARROW SEGMENT TO 14' TRAVELWAY)
14.66	14.66					END PAY ITEM 21201 LINEAR GRADING
	14.78	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.12	MILE	BEGIN PAY ITEM 30315 ROADWAY RECONDITIONING
14.72						EXISTING 18" CMP
14.78	14.78					JCT. W/ ROAD 650 (LEFT)
						END PAY ITEM 20209 SELECTIVE CLEARING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: SEARS CREEK

Road No. _1106_

Length (Miles) 4.98

ROAD TOTAL: $ 26,040.81

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.08	$ 23,850.00	$ 1,908.00
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	1	$ 340.00	$ 340.00
20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	CUBIC YARD	225	$ 10.41	$ 2,342.25
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.02	$ 20,000.00	$ 400.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	5	$ 38.40	$ 192.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	40	$ 38.40	$ 1,536.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	4.96	$ 3,061.00	$ 15,182.56
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	60	$ 69.00	$ 4,140.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: SEARS CREEK

Road No. _1106_

Length (Miles) 4.98

ROAD TOTAL: $ 26,040.81

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.08	$ 23,850.00	$ 1,908.00
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	1	$ 340.00	$ 340.00
20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	CUBIC YARD	225	$ 10.41	$ 2,342.25
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.02	$ 20,000.00	$ 400.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	5	$ 38.40	$ 192.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	40	$ 38.40	$ 1,536.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	4.96	$ 3,061.00	$ 15,182.56
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	60	$ 69.00	$ 4,140.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1106E						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 1106
	0.61	20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	0.61	MILE	12" DBH TREES IN ROADWAY
		21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	0.61	MILE	RECONSTRUCT (WIDEN) TO A 14' MINIMUM TRAVELWAY
0.32		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 18" CMP AS STAKED.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
	0.34	20420A	DRAINAGE EXCAVATION, TYPE ROADSIDE DITCH, TOLERANCE CLASS A, COMPACTION METHOD 5	100	FOOT	CONSTRUCT DITCH TO CAPTURE WATER FROM SHOULDER SPRINGS AND DIRECT INTO CULVERT INSTALLATION LOCATIONS @ MP 0.32 AND MP 0.34
0.34		60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 24" CMP AS STAKED. (LIVE WATER CURRENTLY CROSSING THE ROADWAY).
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.52		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	44	FOOT	INSTALL NEW 18" CMP AS STAKED.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
	0.54	20420A	DRAINAGE EXCAVATION, TYPE ROADSIDE DITCH, TOLERANCE CLASS A, COMPACTION METHOD 5	100	FOOT	CONSTRUCT DITCH TO CAPTURE WATER FROM SHOULDER SPRINGS AND DIRECT INTO CULVERT INSTALLATION LOCATION @ MP 0.52
0.61	0.61					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 21201 LINEAR GRADING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: GOLDEN EAGLE

Road No. _1106E_

Length (Miles) 0.61

ROAD TOTAL: $ 27,978.25

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.08	$ 23,850.00	$ 1,908.00
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.61	$ 3,525.00	$ 2,150.25
20420A	DRAINAGE EXCAVATION, TYPE ROADSIDE DITCH, TOLERANCE CLASS A, COMPACTION METHOD 5	FOOT	200	$ 2.10	$ 420.00
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.61	$ 20,000.00	$ 12,200.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	60	$ 38.40	$ 2,304.00
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	84	$ 69.00	$ 5,796.00
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 80.00	$ 3,200.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _1106E_

Road Name: GOLDEN EAGLE **Length (Miles)** 0.61

ROAD TOTAL: $ 27,978.25

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.08	$ 23,850.00	$ 1,908.00
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.61	$ 3,525.00	$ 2,150.25
20420A	DRAINAGE EXCAVATION, TYPE ROADSIDE DITCH, TOLERANCE CLASS A, COMPACTION METHOD 5	FOOT	200	$ 2.10	$ 420.00
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.61	$ 20,000.00	$ 12,200.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	60	$ 38.40	$ 2,304.00
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	84	$ 69.00	$ 5,796.00
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 80.00	$ 3,200.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1106F						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 1106
	0.61	20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	0.61	MILE	4" DBH TREES IN ROADWAY (CUT OFF) WILL REQUIRE GRUBBING FROM THE ROADWAY.
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.61	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
	0.10	30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	100	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 528' LENGTH (STEEPER SEGMENT OF ROAD).
0.01						EXISTING 16' PIPE GATE
0.15						EXISTING 18" CMP
0.21	0.41	30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	200	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 1056' LENGTH (STEEPER SEGMENT OF ROAD).
0.61	0.61					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: POLE CORRAL

Road No. _1106F_

Length (Miles) 0.61

ROAD TOTAL: $ 20,331.41

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	0.61	$ 9,038.04	$ 5,513.20
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	300	$ 38.40	$ 11,520.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.61	$ 3,061.00	$ 1,867.21

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC
Road Name: POLE CORRAL

Road No. _1106F_
Length (Miles) 0.61

ROAD TOTAL: $ 20,331.41

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	0.61	$ 9,038.04	$ 5,513.20
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	300	$ 38.40	$ 11,520.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.61	$ 3,061.00	$ 1,867.21

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1106F1						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00	0.74					JCT. W/ ROAD 1106F
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	0.74	MILE	4" DBH TREES IN ROADWAY
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.74	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.01						EXISTING 18" CMP
0.20						EXISTING 18" CMP
0.40						EXISTING 18" CMP
0.50						EXISTING 18" CMP
0.56						EXISTING 18" CMP
0.68		20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	1	EACH	REMOVE EXISTING CMP
		60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	42	FOOT	INSTALL NEW 24" CMP AS STAKED. (LIVE WATER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.69	0.74	30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	50	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 264' LENGTH (STEEPER SEGMENT OF ROAD).
0.74	0.74					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: HIGH WEST FORK

Road No. _1106F1_

Length (Miles) 0.74

ROAD TOTAL: $ 11,977.14

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.03	$ 23,850.00	$ 715.50
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.74	$ 3,525.00	$ 2,608.50
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	1	$ 340.00	$ 340.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	70	$ 38.40	$ 2,688.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.74	$ 3,061.00	$ 2,265.14
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	42	$ 80.00	$ 3,360.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: HIGH WEST FORK

Road No. _1106F1_

Length (Miles) 0.74

ROAD TOTAL: $ 11,977.14

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.03	$ 23,850.00	$ 715.50
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.74	$ 3,525.00	$ 2,608.50
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	1	$ 340.00	$ 340.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	70	$ 38.40	$ 2,688.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.74	$ 3,061.00	$ 2,265.14
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	42	$ 80.00	$ 3,360.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1106H						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 1106
	1.14	20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	1.14	MILE	12" DBH TREES IN ROADWAY (CUT OFF) WILL REQUIRE GRUBBING FROM THE ROADWAY.
	1.14	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	1.14	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.12		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	1	EACH	RECONSTRUCT EXISTING DRAIN DIP (DIMENSIONS SHOWN IN DRAWINGS)
0.14		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	1	EACH	RECONSTRUCT EXISTING DRAIN DIP (DIMENSIONS SHOWN IN DRAWINGS)
0.35		30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 6" ABC X 14' WIDTH X 40' LENGTH ON LOW SEGMENT IN THE ROADWAY (HOLDS WATER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 50' LENGTH (SURFACING TO COVER AGGREGATE BASE COURSE PLACED ON LOW SEGMENT).
0.41		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	1	EACH	RECONSTRUCT EXISTING DRAIN DIP (DIMENSIONS SHOWN IN DRAWINGS)
0.50		60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 24" CMP AS STAKED. (LIVE WATER)
		20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	10	CUBIC YARD	THIS EMBANKMENT USED TO REPLACE UNSUITABLE MATERIAL UNEARTHED DURING EXCAVATION FOR NEW CULVERT INSTALLATION- DEVELOP MATERIAL AT LOCATION APPROVED BY THE ER.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.51		30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 6" ABC X 14' WIDTH X 40' LENGTH ON LOW SEGMENT IN THE ROADWAY (HOLDS WATER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 50' LENGTH (SURFACING TO COVER AGGREGATE BASE COURSE PLACED ON LOW SEGMENT).
0.64		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 18" CMP AS STAKED. (SPRING AREA ALONG ROAD SHOULDER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	1	EACH	RECONSTRUCT EXISTING DRAIN DIP (DIMENSIONS SHOWN IN DRAWINGS)
0.76		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	1	EACH	RECONSTRUCT EXISTING DRAIN DIP (DIMENSIONS SHOWN IN DRAWINGS)

WORKLIST						
Road # 1106H						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.78		30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 6" ABC X 14' WIDTH X 40' LENGTH ON LOW SEGMENT IN THE ROADWAY (HOLDS WATER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 50' LENGTH (SURFACING TO COVER AGGREGATE BASE COURSE PLACED ON LOW SEGMENT).
0.81		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	1	EACH	RECONSTRUCT EXISTING DRAIN DIP (DIMENSIONS SHOWN IN DRAWINGS)
1.14	1.14					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: STINKING WATER

Road No. _1106H_

Length (Miles) 1.14

ROAD TOTAL: $ 28,486.51

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.07	$ 23,850.00	$ 1,669.50
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.14	$ 9,038.04	$ 10,303.37
20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	CUBIC YARD	10	$ 10.41	$ 104.10
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	EACH	6	$ 520.00	$ 3,120.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	30	$ 38.40	$ 1,152.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	70	$ 38.40	$ 2,688.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.14	$ 3,061.00	$ 3,489.54
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 69.00	$ 2,760.00
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 80.00	$ 3,200.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _1106H_

Road Name: STINKING WATER **Length (Miles)** 1.14

ROAD TOTAL: $ 28,486.51

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.07	$ 23,850.00	$ 1,669.50
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.14	$ 9,038.04	$ 10,303.37
20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	CUBIC YARD	10	$ 10.41	$ 104.10
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	EACH	6	$ 520.00	$ 3,120.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	30	$ 38.40	$ 1,152.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	70	$ 38.40	$ 2,688.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.14	$ 3,061.00	$ 3,489.54
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 69.00	$ 2,760.00
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 80.00	$ 3,200.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1106I						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 1106
	0.28	20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	0.28	MILE	24" DBH TREES IN ROADWAY
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.28	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
	0.15	30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	140	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 792' LENGTH (STEEPER SEGMENT OF ROAD).
0.02						EXISTING 16' PIPE GATE
0.05						EXISTING 18" CMP
0.15	0.15					END PAY ITEM 30115 AGGREGATE SURFACE COURSE PLACEMENT
0.28	0.28					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: HAPPY HOODOO

Road No. _1106I_

Length (Miles) 0.28

ROAD TOTAL: $ 7,697.08

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.02	$ 23,850.00	$ 477.00
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.28	$ 3,525.00	$ 987.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	140	$ 38.40	$ 5,376.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.28	$ 3,061.00	$ 857.08

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: HAPPY HOODOO

Road No. _1106I_

Length (Miles) 0.28

ROAD TOTAL: $ 7,697.08

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.02	$ 23,850.00	$ 477.00
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.28	$ 3,525.00	$ 987.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	140	$ 38.40	$ 5,376.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.28	$ 3,061.00	$ 857.08

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1160						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
						JCT. W/ ROAD 1106
	1.69	20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	1.69	MILE	6" DBH TREES IN ROADWAY (CUT OFF) WILL REQUIRE GRUBBING FROM THE ROADWAY.
0.00	1.69	30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	1762	CUBIC YARD	PLACE 4" ASC X 14' MINIMUM WIDTH X 8923' LENGTH (1.69 MILES) - (ADDITIONAL 2' WIDTH USED IN QUANTITY CALCULATIONS TO ACCOUNT FOR CURVES REQUIRING ADDITIONAL ASC WIDTH)
	1.10	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	1.10	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
						EXISTING 15' PIPE GATE
0.02		63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	1	EACH	EXISTING GATE REQUIRES INSTALLATION OF A NEW FBM-L SIGN
		63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	1	EACH	EXISTING GATE REQUIRES INSTALLATION OF A NEW FBM-R SIGN
0.08						EXISTING 18" CMP
0.10						EXISTING 18" CMP
0.29						EXISTING 18" CMP
0.36						EXISTING 18" CMP
0.41						EXISTING 18" CMP
0.47						EXISTING 18" CMP
0.55						EXISTING 18" CMP
0.62						EXISTING 18" CMP
0.69						JCT. W/ ROAD 1160D
0.78						EXISTING 18" CMP
0.83						EXISTING 18" CMP
0.88						EXISTING 18" CMP
		20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	1	EACH	REMOVE EXISTING CMP
0.92		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 18" CMP AS STAKED.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.98						EXISTING 18" CMP
1.04						EXISTING 18" CMP
1.07						EXISTING 18" CMP
1.10	1.10					END PAY ITEM 30315 ROADWAY RECONDITIONING

WORKLIST						
Road # 1160						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
1.10	1.69	21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	0.59	MILE	RECONSTRUCT (WIDEN) TO A 14' MINIMUM TRAVELWAY (FOLLOW EXISTING CENTERLINE OR FLAG LINE)
1.69	1.69					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 21201 LINEAR GRADING
						END PAY ITEM 30115 AGGREGATE SURFACE COURSE
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: RABBIT CREEK

Road No. _1160_

Length (Miles) 1.69

ROAD TOTAL: $ 109,325.19

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.30	$ 23,850.00	$ 7,155.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.69	$ 9,038.04	$ 15,274.29
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	1	$ 340.00	$ 340.00
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.59	$ 20,000.00	$ 11,800.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	1782	$ 38.40	$ 68,428.80
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.10	$ 3,061.00	$ 3,367.10
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 69.00	$ 2,760.00
63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00
63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: RABBIT CREEK

Road No. _1160_

Length (Miles) 1.69

ROAD TOTAL: $ 109,325.19

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.30	$ 23,850.00	$ 7,155.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.69	$ 9,038.04	$ 15,274.29
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	1	$ 340.00	$ 340.00
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.59	$ 20,000.00	$ 11,800.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	1782	$ 38.40	$ 68,428.80
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.10	$ 3,061.00	$ 3,367.10
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 69.00	$ 2,760.00
63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00
63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 1160D						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 1160
	1.55	20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	1.55	MILE	12" DBH TREES IN ROADWAY (CUT OFF) WILL REQUIRE GRUBBING FROM THE ROADWAY.
	0.55	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.55	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.03						EXISTING 18" CMP
0.14						EXISTING 18" CMP
0.19						EXISTING 18" CMP
0.34						EXISTING 18" CMP
0.45						EXISTING 18" CMP
0.51						EXISTING 18" CMP
0.55		60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	40	FOOT	CONSTRUCT UNDER DRAIN - (3' DEPTH X 14' WIDTH X 40' LENGTH) AS SHOWN IN THE DRAWINGS.
		30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	10	CUBIC YARD	GEOFABRIC WRAPPED DRAIN ROCK AS SHOWN IN THE DRAWINGS.
		30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	60	CUBIC YARD	PLACE 6" MINUS PIT RUN AS SHOWN IN DRAWINGS.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 50' LENGTH
0.55	0.55					END PAY ITEM 30315 ROADWAY RECONDITIONING
	0.67	21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	0.12	MILE	RECONSTRUCT (WIDEN) TO A 14' MINIMUM TRAVELWAY
0.64		60201C	36 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 36" CMP AS STAKED. (LIVE WATER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.67	0.67					END PAY ITEM 21201 LINEAR GRADING
0.67	1.55	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.88	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
1.55	1.55					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: PACK MULE

Road No. _1160D_

Length (Miles) 1.55

ROAD TOTAL: $ 34,160.19

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.08	$ 23,850.00	$ 1,908.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.55	$ 9,038.04	$ 14,008.96
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.12	$ 20,000.00	$ 2,400.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	30	$ 38.40	$ 1,152.00
30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	CUBIC YARD	10	$ 65.00	$ 650.00
30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	CUBIC YARD	60	$ 32.40	$ 1,944.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.43	$ 3,061.00	$ 4,377.23
60201C	36 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 123.00	$ 4,920.00
60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	FOOT	40	$ 70.00	$ 2,800.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _1160D_

Road Name: PACK MULE **Length (Miles)** 1.55

ROAD TOTAL: $ 34,160.19

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.08	$ 23,850.00	$ 1,908.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.55	$ 9,038.04	$ 14,008.96
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.12	$ 20,000.00	$ 2,400.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	30	$ 38.40	$ 1,152.00
30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	CUBIC YARD	10	$ 65.00	$ 650.00
30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	CUBIC YARD	60	$ 32.40	$ 1,944.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.43	$ 3,061.00	$ 4,377.23
60201C	36 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	40	$ 123.00	$ 4,920.00
60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	FOOT	40	$ 70.00	$ 2,800.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 9441						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 1106
	0.46	30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.46	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
	0.37	20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	0.37	MILE	SELECTIVE CLEARING WORK SHALL BE COMPLETED ACCORDING TO THE CLEARING LIMITS SHOWN IN THE FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS (FSSS) AND DRAWINGS.
0.05						EXISTING PIPE GATE
		63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	1	EACH	EXISTING GATE REQUIRES INSTALLATION OF A NEW FBM-L SIGN
		63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	1	EACH	EXISTING GATE REQUIRES INSTALLATION OF A NEW FBM-R SIGN
0.14						EXISTING 18" CMP
0.37	0.37					END PAY ITEM 20209 SELECTIVE CLEARING
						JCT. W/ ROAD 9441A (LEFT)
0.37	0.46	20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	0.09	MILE	6" DBH TREES IN ROADWAY
0.46	0.46					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: WALL CREEK

Road No. _9441_

Length (Miles) 0.46

ROAD TOTAL: $ 2,733.61

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.01	$ 23,850.00	$ 238.50
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE	0.37	$ 1,540.00	$ 569.80
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.09	$ 3,525.00	$ 317.25
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.46	$ 3,061.00	$ 1,408.06
63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00
63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _9441_

Road Name: WALL CREEK **Length (Miles)** 0.46

ROAD TOTAL: $ 2,733.61

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.01	$ 23,850.00	$ 238.50
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE	0.37	$ 1,540.00	$ 569.80
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.09	$ 3,525.00	$ 317.25
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.46	$ 3,061.00	$ 1,408.06
63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00
63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	EACH	1	$ 100.00	$ 100.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 9441A						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
						JCT. W/ ROAD 9441
0.00	1.16	20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	1.16	MILE	SELECTIVE CLEARING WORK SHALL BE COMPLETED ACCORDING TO THE CLEARING LIMITS SHOWN IN THE FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS (FSSS) AND DRAWINGS.
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	1.16	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.01		20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	1	EACH	RECONSTRUCT EXISTING DRAIN DIP (DIMENSIONS SHOWN IN DRAWINGS)
0.07						EXISTING 18" CMP
0.21		20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	1	EACH	REMOVE EXISTING CMP
		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 18" CMP AS STAKED.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.27		20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	1	EACH	REMOVE EXISTING CMP
		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 18" CMP AS STAKED.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.43		20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	1	EACH	`
		60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 18" CMP AS STAKED.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.51						EXISTING 18" CMP
0.58						EXISTING 18" CMP
0.63						EXISTING 18" CMP
0.70						EXISTING 18" CMP
0.93						EXISTING 18" CMP
0.97						EXISTING 18" CMP
1.13						EXISTING 18" CMP
1.16	1.16					JCT. W/ ROAD 9441A2 (RIGHT)
						END PAY ITEM 20209 SELECTIVE CLEARING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: BALD EAGLE

Road No. _9441A_

Length (Miles) 1.16

ROAD TOTAL: $ 18,892.16

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE	1.16	$ 1,540.00	$ 1,786.40
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	3	$ 340.00	$ 1,020.00
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	EACH	1	$ 520.00	$ 520.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	60	$ 38.40	$ 2,304.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.16	$ 3,061.00	$ 3,550.76
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	120	$ 69.00	$ 8,280.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: BALD EAGLE

Road No. _9441A_

Length (Miles) 1.16

ROAD TOTAL: $ 18,892.16

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE	1.16	$ 1,540.00	$ 1,786.40
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	3	$ 340.00	$ 1,020.00
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	EACH	1	$ 520.00	$ 520.00
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	60	$ 38.40	$ 2,304.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.16	$ 3,061.00	$ 3,550.76
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	120	$ 69.00	$ 8,280.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 9441A1						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 9441A
	0.26	20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	0.26	MILE	6" DBH TREES IN ROADWAY
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.26	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.08		60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	50	FOOT	CONSTRUCT UNDER DRAIN - (3' DEPTH X 14' WIDTH X 50' LENGTH) AS SHOWN IN THE DRAWINGS.
		30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	10	CUBIC YARD	GEOFABRIC WRAPPED DRAIN ROCK AS SHOWN IN THE DRAWINGS.
		30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	80	CUBIC YARD	PLACE 6" MINUS PIT RUN AS SHOWN IN DRAWINGS.
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	10	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 50' LENGTH
0.09		60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	40	FOOT	INSTALL NEW 24" CMP AS STAKED. (LIVE WATER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.10		60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	50	FOOT	INSTALL NEW 24" CMP AS STAKED. (LIVE WATER)
		30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	20	CUBIC YARD	PLACE 4" ASC +/- 50' X ROAD WIDTH
0.26	0.26					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: RED HAWK

Road No. _9441A1_

Length (Miles) 0.26

ROAD TOTAL: $ 19,005.36

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.26	$ 3,525.00	$ 916.50
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	50	$ 38.40	$ 1,920.00
30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	CUBIC YARD	10	$ 65.00	$ 650.00
30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	CUBIC YARD	80	$ 32.40	$ 2,592.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.26	$ 3,061.00	$ 795.86
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	90	$ 80.00	$ 7,200.00
60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	FOOT	50	$ 70.00	$ 3,500.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _9441A1_

Road Name: RED HAWK **Length (Miles)** 0.26

ROAD TOTAL: $ 19,005.36

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.26	$ 3,525.00	$ 916.50
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	50	$ 38.40	$ 1,920.00
30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	CUBIC YARD	10	$ 65.00	$ 650.00
30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	CUBIC YARD	80	$ 32.40	$ 2,592.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.26	$ 3,061.00	$ 795.86
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	90	$ 80.00	$ 7,200.00
60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	FOOT	50	$ 70.00	$ 3,500.00

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 9441A2						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 9441A
	0.32	20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	0.26	MILE	SELECTIVE CLEARING WORK SHALL BE COMPLETED ACCORDING TO THE CLEARING LIMITS SHOWN IN THE FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS (FSSS) AND DRAWINGS.
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	0.26	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
0.03						EXISTING 18" CMP
0.14						EXISTING 18" CMP
0.23						EXISTING 18" CMP
0.26	0.26					END PAY ITEM 30315 ROADWAY RECONDITIONING
						END PAY ITEM 20209 SELECTIVE CLEARING
0.26	0.32	21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	0.06	MILE	RECONSTRUCT (WIDEN) TO A 14' MINIMUM TRAVELWAY
		20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	0.06	MILE	6" DBH TREES IN ROADWAY
0.32	0.32					END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 21201 LINEAR GRADING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: STAGE PIT

Road No. _9441A2_

Length (Miles) 0.32

ROAD TOTAL: $ 2,846.26

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.01	$ 23,850.00	$ 238.50
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE	0.26	$ 1,540.00	$ 400.40
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.06	$ 3,525.00	$ 211.50
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.06	$ 20,000.00	$ 1,200.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.26	$ 3,061.00	$ 795.86

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC **Road No.** _9441A2_

Road Name: STAGE PIT **Length (Miles)** 0.32

ROAD TOTAL: $ 2,846.26

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.01	$ 23,850.00	$ 238.50
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE	0.26	$ 1,540.00	$ 400.40
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	0.06	$ 3,525.00	$ 211.50
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	0.06	$ 20,000.00	$ 1,200.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	0.26	$ 3,061.00	$ 795.86

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

WORKLIST						
Road # 9442						
BEG M.P.	END M.P.	PAY ITEM	WORK DESCRIPTION	QTY	UNIT	NOTES / DETAILS
0.00						JCT. W/ ROAD 1106
	1.44	20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	1.44	MILE	4" DBH TREES IN ROADWAY (CUT OFF) WILL REQUIRE GRUBBING FROM THE ROADWAY.
		30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	1.44	MILE	CLEAN DITCHES, CULVERT CATCHBASINS, INLETS AND OUTLETS ACCORDING TO SPECIFICATION.
	0.21	30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	200	CUBIC YARD	PLACE 4" ASC X 14' WIDTH X 1110' LENGTH (STEEPER SEGMENT OF ROAD).
0.03						EXISTING 15' PIPE GATE
0.42						EXISTING 18" CMP
0.46						EXISTING 24" CMP
0.54						EXISTING 18" CMP
0.84						EXISTING 18" CMP
0.89						EXISTING 18" CMP
1.03						EXISTING 24" CMP
1.11						EXISTING 18" CMP
1.14						EXISTING 18" CMP
1.20						EXISTING 18" CMP
1.25						EXISTING 36" CMP
1.44	1.44					JCT. W/ ROAD 9442A (RIGHT)
						END PAY ITEM 20210 SPECIAL CLEARING AND GRUBBING
						END PAY ITEM 30315 ROADWAY RECONDITIONING
						END OF PROJECT

SCHEDULE OF ITEMS

(Timber Sale)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: VOODOO BILL

Road No. _9442_

Length (Miles) 1.44

ROAD TOTAL: $ 26,533.62

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.44	$ 9,038.04	$ 13,014.78
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	200	$ 38.40	$ 7,680.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.44	$ 3,061.00	$ 4,407.84

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

ENGINEERS ESTIMATE

(Public Works Davis-Bacon)

Timber Sale: CLEAR CORRAL STWD - IRTC

Road Name: VOODOO BILL

Road No. _9442_

Length (Miles) 1.44

ROAD TOTAL: $ 26,533.62

TOTAL ALL ROADS: $ 364,029.55

Item Number	Description	Unit	Quantity	Unit Price	Total
15101	MOBILIZATION	LUMP SUM	0.06	$ 23,850.00	$ 1,431.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	1.44	$ 9,038.04	$ 13,014.78
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	200	$ 38.40	$ 7,680.00
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	1.44	$ 3,061.00	$ 4,407.84

Items denoted with an asterisk (*) appended to the unit of measure are designated as contract quantities.

TIMBER SALE NAME: CLEAR CORRAL STWD - IRTC

WAGE ADJUSTMENT FACTOR TABLE: No Adjustment

ITEM NO	DESCRIPTION	UNITS	LABOR %	UNADJUSTED UNIT COST	PW WAGE ADJUSTMENT FACTOR	PW UNIT COST	TS WAGE ADJUSTMENT FACTOR	TS UNIT COST
15101	MOBILIZATION	LUMP SUM	30	$23,850.00	1.00	$23,850.00	1.00	$23,850.00
20209	SELECTIVE CLEARING, TYPE ROADSIDE, DISPOSAL METHOD (f)	MILE	70	$1,540.00	1.00	$1,540.00	1.00	$1,540.00
20210	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2	MILE	70	$3,525.00	1.00	$3,525.00	1.00	$3,525.00
20210A	SPECIAL CLEARING AND GRUBBING, TYPE ROADWAY, DISPOSAL METHOD (f), COMPACTION METHOD 2 (PREVIOUSLY MASTICATED)	MILE	70	$9,038.04	1.00	$9,038.04	1.00	$9,038.04
20302	REMOVAL OF CULVERT, DISPOSAL METHOD A, COMPACTION METHOD 5	EACH	35	$340.00	1.00	$340.00	1.00	$340.00
20401	ROADWAY EXCAVATION, COMPACTION METHOD 2, TOLERANCE CLASS A	CUBIC YARD	35	$10.41	1.00	$10.41	1.00	$10.41
20420A	DRAINAGE EXCAVATION, TYPE ROADSIDE DITCH, TOLERANCE CLASS A, COMPACTION METHOD 5	FOOT	35	$2.10	1.00	$2.10	1.00	$2.10
20421A	DRAINAGE EXCAVATION, TYPE II DRAIN DIP, TOLERANCE CLASS A, COMPACTION METHOD 2	EACH	35	$520.00	1.00	$520.00	1.00	$520.00
21201	LINEAR GRADING, COMPACTION METHOD 2, DISPOSAL METHOD (F)	MILE	40	$20,000.00	1.00	$20,000.00	1.00	$20,000.00
30103	AGGREGATE BASE COURSE, GRADATION W, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	45	$38.40	1.00	$38.40	1.00	$38.40
30115	AGGREGATE SURFACE COURSE, GRADATION F, (b) COMPACTION METHOD B - GOV'T SOURCE	CUBIC YARD	20	$38.40	1.00	$38.40	1.00	$38.40
30210	1" CLEAN DRAIN ROCK, COMMERCIAL SOURCE	CUBIC YARD	20	$65.00	1.00	$65.00	1.00	$65.00
30210A	6" MINUS - PIT RUN - DRAIN ROCK, GOV'T SOURCE	CUBIC YARD	50	$32.40	1.00	$32.40	1.00	$32.40
30315	ROADWAY RECONDITIONING, COMPACTION METHOD 2	MILE	45	$3,061.00	1.00	$3,061.00	1.00	$3,061.00
60201A	18 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	15	$69.00	1.00	$69.00	1.00	$69.00
60201B	24 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	60	$80.00	1.00	$80.00	1.00	$80.00
60201C	36 INCH PIPE CULVERT, CORRUGATED STEEL, 16 GAGE, COMPACTION METHOD 2	FOOT	60	$123.00	1.00	$123.00	1.00	$123.00
60503	UNDER DRAIN CONSTRUCTION (INCLUDES GEOTEXTILE AND DRAINAGE COMPONENTS)	FOOT	60	$70.00	1.00	$70.00	1.00	$70.00
63304A	BARRICADE MARKER SIGN (FBM-L), METAL PANEL, TYPE III SHEETING	EACH	60	$100.00	1.00	$100.00	1.00	$100.00
63304B	BARRICADE MARKER SIGN (FBM-R), METAL PANEL, TYPE III SHEETING	EACH	60	$100.00	1.00	$100.00	1.00	$100.00